ABSTRACT OF THE

Brown Lectures.

Delivered at the University of London,

BY VICTOR HORSLEY, F.R.C.S., F.R.S.

THE PATHOLOGY OF THE THYROID GLAND.

LECTURE I.

IN the lectures delivered last year on the pathological relations of the thyroid gland, evidence was adduced tending to show that this body was an excretory or rather metabolic organ, without being provided with the usual duct of such organs. It was also shown that the gland possessed some sort of hæmapoietic function, since the number of red blood-discs in the efferent vein was greater than their number in the afferent artery. Whether the gland exercised any power of forming the fluid portions of blood must remain at present a doubtful matter. Hitherto it had been held that the gland was a maker of corpuscles only. But blood is not a definitely complete or finished tissue like muscle or nerve; at the same time it is not a mere carrier of oxygen, food, and excreta. The ease with which blood when lost can be replaced in the organism was an important and suggestive circumstance. Blood may be regarded as an intermediate tissue, and it is interesting to remember its embryonic origin from the connective tissue cells as shown by Schäfer and others. It is an intermediate tissue also in serving to unite in itself all the requirements of every other tissue. Probably the thyroid gland is hæmapoietic as the result of some metamorphosing influence it may have on the fluid constituents of the blood. Last year it was apparently demonstrated also that it was a direct corpuscle-maker. The subject that treated of the manufacture of blood-corpuscles was, however, always a difficult problem, and especially so when the rapid way in which they were regenerated after acute losses of blood is considered. But some remarkable researches made by Wooldridge might throw a flood of light on this dark question. Indeed, the notion of Wooldridge that the blood-plasma was but a mass of fluid protoplasm from which corpuscles might be precipitated in the fashion of a spontaneous generation should be regarded as a revolutionary idea, but nevertheless as one deserving of careful consideration. There could be no doubt, however, that Wooldridge's observation, to the effect that the mere action of cold upon corpuscle-free blood-plasma could produce a precipitate of biconcave discs, was a perfectly true and faithful observation, which had been attested even by the great Virchow himself. So that whether we go with Wooldridge or not in believing that blood-plasma was fluid protoplasm, we must recognise the value of his important discovery. Taking the observation of Wooldridge as a lever, we might argue that the thyroid gland may possess a cytopoietic function in an indirect fashion, the blood-discs being precipitated from the fluid blood-plasma by some method as yet unknown. But this was only thrown out by way of suggestion, and Mr. Horsley did not mean to imply anything further than that such a process might be part of the hæmapoietic function of the thyroid gland.

The next subject discussed was the histology of the thyroid glands. The acini were well-known microscopic objects, but not so the embryonic tissue, which had been described by Cresswell Baber, and which Mr. Horsley had specially investigated. This tissue was composed of columns of cells round which blood capillaries coursed; hence it had a mesh-like aspect. In some animals a large quantity of this tissue could be formed in a single lump beneath the capsule. This lump of embryonic tissue was also separately and distinctly encapsuled. Virchow considered that such a lump might be the homologue of a single acinus; but the Brown Professor could not accede to this position. Although the tissue was regarded as embryonic, still it had not been demonstrated that this tissue ever developed into acini; on the contrary, the result of researches into this matter had hitherto rather tended to oppose the likelihood of such a supposition being true. Of the nature of the large parenchymatous cells described by Weber we were equally also in the dark. These views were also borne out by the observations of Stieda on the development of the thyroid gland. That these nodules of "embryonic" tissue were not only imperfect developments of thyroid tissue was also rendered probable by the fact that the nodules, instead of becoming further metamorphosed, increased in size, number, and staining power when the thyroid gland underwent development as the result of removal of one lobe. This operation of removal of the lobe may be carried out in dogs by the exercise of antiseptic precautions, and the animal may be then kept alive for a great number of days. In one case in which Mr. Horsley had operated the animal was killed after the lapse of 160 days from the operation. The animal was a young adult bitch, and had exercised the functions of a parent, increasing in weight and size during that period. The lobe of the gland that was left became hypertrophied so as to be four or five times its normal size. One of the most remarkable features of the thyroid hypertrophy was the great vascular engorgement, which was probably in relation to the increased amount of hæmapoietic function which would be thrown upon it so long as there was no emaciation of the animal. If the animal wasted after the removal of the lobe of the thyroid gland, then there need be, and probably would be, no hypertrophy of the remaining lobe.

Mr. Horsley discussed minutely the histology of compensatory hypertrophy of the kidney, and showed that hypertrophy in this case was also at the command of the body weight. If this did not increase, and if there was actual loss of weight, the compensatory hypertrophy of the remaining kidney did not occur. This matter of increase or diminution of body weight gave a clue to much of the want of harmony that existed on the subject of compensatory hypertrophy; and Lorenz, in a recent number of the *Deutsches Archiv*, had pointed out the great importance, and indeed deserved to receive much credit for insisting on the importance, of the matter. Remembering, then, that compensatory hypertrophy might not occur if the animal did not keep up its weight, Mr. Horsley proceeded to demonstrate the histological facts of renal and thyroidal compensatory hypertrophy. The renal enlargement was both macroscopic and microscopic. The cortex was more hypertrophied, far more than the pyramids, and the hypertrophy was chiefly seen in a greater size and a greater number of the vascular glomeruli, in the greater size of the lumina of the convoluted and straight tubules, and in a hyperplasia and hypertrophy of the epithelial cells lining the convoluted tubules. The connective tissue did not appear to be increased in amount. In hypertrophy of the thyroid the acini were found to undergo very remarkable changes; the epithelial cells lining them multiplied in number and increased in size, so that there was a plication of the acinal wall; but the full reason for this folding-in of the wall of the acinus, Mr. Horsley said, was not yet forthcoming. There was no increase in the number of the parenchymatous cells of Weber, and no metamorphosis of the "embryonic" tissue into acini. The change that occurred in the contents of the acini was not the least striking feature of the alterations. The colloid material did not increase in amount, but changed its consistence, became softer, more viscous, and less solid; so that at one time it appeared like a network of viscosity, and later on had a watery aspect in which floated a few granules. Increased activity of the organ appeared, therefore, to cause a diminution in the consistence, and this was contrasted with the greater solidification of the acinal contents that occurred when the function of the gland was less active.

LECTURE II.

Relation of the Thyroid to the Encephalon.—The question of the relation of the thyroid gland to the cerebral hemispheres has been discussed by Luschka, Liebermeister, Guyon, and others. Most of these observers believed that the thyroid gland acted as a kind of bolster to support the circulation to the brain, and they attributed the nervous disturbances that followed the extirpation of the organ to the removal of its mechanical support or function. John Simon, however, somewhat modified this view, and believed that the thyroid gland might serve as a drain to relieve the cerebral hemispheres from much pressure, and be

also thought that it was a special source of nutrition to the brain in such a way as that each lobe had some relation to each hemisphere of the same side. Mr. Horsley believed, however, that the relation of the thyroid gland to the brain was an apparent and not a real one, and experimental evidence was adduced to prove this position. An adult fox terrier, from whom one lobe of the thyroid gland was removed, was submitted to experimental excitation of the cerebral hemispheres after the expiration of a period of 271 days. An adult black-and-tan dog was similarly the subject of an experiment 109 days after removal of one lobe of the thyroid; also a bonnet monkey eighty-four days after a similar operation. The motor centres of each of these animals were exposed under precisely similar conditions. Excitations with the faradaic current were made to each motor part of the hemisphere in each animal, and with the result that no difference could be detected on the two sides. The period of latency, tonic spasm, and clonic spasm—epileptic motor phenomena—were precisely the same whether the right or left hemisphere was stimulated. It was clear then that removal of the one lobe of the thyroid had exerted no detectible influence over the nutrition of the motor cerebral centres on the same side. German workers in this department had come to the conclusion that the thyroid gland had a special metabolic function over those waste products which were specially inimical to the nervous system, and especially the brain. This view was put forward in order to explain the rapid onset of nervous symptoms, which were the most noteworthy and earliest symptoms in many of the animals from whom the thyroid gland had been wholly extirpated. Mr. Horsley said that he would adopt this view, but only in a tentative way.

Innervation of the Thyroid Gland.—Mr. Horsley stated that there was no experimental or clinical evidence that the thyroid gland is represented in the cerebral hemispheres. The gland receives from the medulla oblongata sympathetic fibres, which pass down the cervical part of the spinal cord as far as the eighth cervical nerve, and then leave the cord and proceed upwards in a direction almost parallel to their former direction in the cord, and are distributed to the glands along the arterial vessels. The gland appears also to receive nerve fibres from the recurrent laryngeal nerve, which are probably derived from the motor nucleus of the spinal accessory. Dr. Hale White had advanced the theory that the recurrent laryngeal nerve was the trophic nerve of the gland. This view was based on the observation of two cases of disease in which the recurrent laryngeal nerve had been compressed by the pressure of an aneurysm in one case, and by the slow growth of a tumour in another, and in both of which there was atrophy of the gland on the side on which the recurrent nerve was damaged. Dr. Hale White, however, also published a third case of tumour of the base of the brain, in which the vagus nerve was involved, but in which there was no atrophy. It was suggested by him that the trophic fibres of the thyroid gland joined the recurrent nerve lower down than the seat of the tumour in this third case. Mr. Horsley pointed out that in the first case the sympathetic fibres going to the thyroid gland must have been affected, and that they may have been involved in the second of Dr. White's cases. He himself believed that the gland was chiefly supplied by the sympathetic nerves; that the sympathetic was the "secretory" or "glandular" nerve. The facts relating to the submaxillary gland were adduced in support of this view, and it was thought that the "secretory" nerves of the thyroid were contained in the sympathetic in the same manner as the "secretory" fibres of the chorda tympani were arranged in the nerve-supply to the submaxillary gland. In order to place on an experimental basis the subject of innervation of the gland Mr. Horsley had performed two experiments on dogs. In each dog an inch of the recurrent laryngeal nerve was excised on one side. One dog was kept alive nine and the other eleven months. But there was no histological difference to be detected between the lobes of the thyroid in either case. Schiff had made some incomplete experimental observations on the influence of the sympathetic nerve on the thyroid gland. He had torn through all the sympathetic nerve fibres going to the gland on the coats of the arteries. This, though a tedious, was a possible operation. As the result of it, Schiff detected no change in the nutrition of the gland, except the unavoidable hyperæmia. But as Schiff did not keep the animals alive for longer than a few days and as alterations might require a much longer time to become manifest, Mr. Horsley considered that we must await the result of further investigation before coming to any conclusion concerning the influence of the sympathetic nerve-supply.

Comparative Pathology of the Thyroid Gland.—The Brown Professor next took up the subject of the relation of the thyroid gland to the metabolic processes in different kinds of animals. The first problem was to estimate the importance of the gland to the body processes in the various classes of animals. This was altogether a very wide field, and one which he had but just begun to explore. Indeed his observations had been largely interrupted in this direction by the more pressing investigations in relation to rabies. But he had, nevertheless, obtained results of a sufficiently clear nature to show that the gland possessed a very different activity in different animals. This difference was expressed not only anatomically, but also pathologically. Moreover, there was an exact proportion between the activity of the gland and the symptoms that followed its removal. The exact proportion obtained in this way: The greater the activity of the gland in any particular animal or class of animals the more urgent and rapid were the symptoms that followed its removal; and, conversely, the less the activity of the gland the longer the animal lived without symptoms. The relation, however, on which Mr. Horsley specially insisted at the present time was the anatomical one. In the donkey the thyroid consists of two small lobes unconnected by an isthmus. Not only were the glands very small to the naked eye, but the acini of which they were composed were also very minute and numerous, and contained but little colloid material in their interiors. The suggestion was made that where the glands and acini are small functional activity is slight. One experiment was made on a donkey. The thyroid gland was excised in August, 1885, and the animal died in 205 days, or about seven months. The chief symptoms for two months were emaciation and weakness; the mental hebetude, if any, was difficult to gauge; the temperature of its body was but slightly lowered. In March, 1886, when the weather became severely cold, nervous symptoms suddenly supervened, and tremors were observed for three days, chiefly in the muscles of the head and neck. On the fourth day these were complicated by constant twitching; the animal became so weak as to be unable to stand, and the body temperature became markedly lowered. Later still muscular rigidity was observed, and also the paralysis increased, especially in the jaw. On the fifth day of the cold weather the donkey became much worse, and died in the morning. This experiment seemed to show that the gland in the donkey was of but relatively little importance, and the case also brought out very clearly the malignant influence of cold when the thyroid gland was inactive or had been altogether removed. Two experiments had been made in sheep, which have a comparatively good-sized thyroid gland, but though the operation was performed in October, 1885, the animals were still well. It was impossible, however, to say yet whether the whole of the glands had been removed. In two pigs the removal of the thyroid was followed by characteristic symptoms of tremors, leucocytosis, and anæmia, with subnormal temperature. The duration of the incubation period in these animals was probably rather a long one, but uncertainty may be caused by accidental circumstances. In monkeys the symptoms supervened fairly rapidly after removal of the gland, especially in cold weather, and in young animals. In cats also the symptoms soon became evident, and this was even more marked in the cases of young adult dogs. In the last three sorts of animals the glands were fairly large, and so were their acini. The whole subject, however, required further investigation.

SURGICAL APPLIANCES AND THE HOSPITAL SATURDAY FUND.—The committee which was appointed last January by the Board of Delegates of the Hospital Saturday Fund to carry out an extension of this fund's usefulness—viz., the provision of surgical appliances and instruments at one-half the contract price to cases recommended by such fund collectors—have just made a report of their work to the end of their financial year, Nov. 30th. Assistance has been afforded to 632 cases, the average cost being 6*s.* 8*d.* for each appliance. The expenditure has amounted to nearly £300, of which patients have paid £100. A balance remains of £180.

DISLOCATION OF THE HIP.

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MY attention has been directed to a lecture by Professor Humphry in THE LANCET of Nov. 27th, 1886, on three cases of hip dislocations. In his remarks the lecturer says: "It has lately been maintained, upon insufficient grounds I think, that the dislocations of the hip backwards are always, or almost always, indirect; that the head of the bone escapes from the acetabulum close to the transverse ligament, and is then, if the limb be in an inverted position, carried backwards, and perhaps upwards. Furthermore, it is held that the accident occurs during the *ab*ducted position of the limb." Professor Humphry's authority on anatomical and surgical matters is so well recognised that any views published by him are likely to be accepted by the majority without hesitation or question. It is for this reason that I venture to point out, with due respect for the weight of his opinions, wherein there is ground for differing from his conclusions.

I will, as briefly as possible, first state how very nearly the views which I have published correspond with those which Professor Humphry seeks to disprove, and upon what kind of foundation my views are based.

Ten years ago, when demonstrator of practical surgery, I found myself expected to teach that the "backward," or (as Hamilton calls them) "backward and upward," varieties of the four regular dislocations—namely, the dorsal and the ischiatic—were always produced by violence applied to the limb when in a flexed and *ad*ducted position; that in these dislocations the head of the femur reached its new position by being driven there *directly* through the back of the capsule; that the head of the bone often escaped through a mere buttonhole in the capsule; and that in the dorsal dislocation it always passed out above the tendon of the obturator internus. This teaching, venerable and authoritative as it is, seemed to me so inconsistent with the anatomical construction of the joint, and with the magical ease with which dorsal and ischiatic dislocations are reduced by manipulations—i.e., by movements which simply bring the head of the femur down to the lower and shallow edge of the acetabulum, and then turn it upwards into its socket through the rent here situated,—so inconsistent, too, with the facility with which pubic and obturator dislocations can be converted into dorsal, or dorsal and ischiatic into pubic, that I was induced to investigate for myself.

My inquiries were directed first to the anatomy of the joint, and to the results of experiments on the dead subject, but they by no means ended there. I carefully studied the descriptions of published cases, and the contents of many museums, both British and foreign: and in course of time I published no less than five cases of traumatic dislocations of the hip, which had been under my own care,[1] besides the description of another, the dissection of which was made under my own observation. This I believe to be a somewhat larger experience than usually falls to the lot of one surgeon within a period of five or six years. Moreover, I have since had the advantage of witnessing the dissection of a seventh case, an account of which was published by Mr. Hulke, in a lecture in THE LANCET. I hope, therefore, I have not allowed myself to infer too much from experiments on the dead body. Certainly, I have taken pains to check and, where necessary, correct the inferences I drew from such experiments, and to obtain from all these sources put together sufficient grounds for the opinions I maintain. Some of these views I may shortly sum up as follows:—1. In the regular backward dislocations (i.e., dorsal and sciatic) the head of the femur leaves the acetabulum in a downward, or downward and backward, direction through a rupture in the thin parts of the capsule, and is carried upwards outside the acetabulum to its position on the dorsum ilii or ischium. In other words, that these dislocations (when not complicated with fracture of one or both bones of the joint) are indirect in the sense that the head of the bone ascends to its position after having burst through the capsule at a lower point. 2. That the thin part of the capsule is all that portion of it, except the narrow pubo-femoral band, which is below and between two imaginary lines—namely, one drawn from the inferior iliac spine to the small trochanter, and the other from the upper part of the tuber ischii to the digital fossa of the femur. 3. That during *ab*duction the head of the bone bulges against the thin portion of the capsule, and that in this position dislocation most easily occurs. 4. That the mode of occurrence of backward dislocations described in No. 1 affords the only rational explanation of the ease with which dorsal and sciatic dislocations are reduced, or converted into the pubic variety, by manipulation.

After refuting the statement that dislocations backwards occur in the living body during *ab*duction, Professor Humphry states the following to be some of the points to which he specially wishes to direct attention: "1. The position of the rent in the capsule through which the head of the bone escapes from the acetabulum—namely, at the lower and back part, behind the pubo-femoral ligament, therefore not at the lowest part, although the weakness of the capsule here may seem to predispose it to give way in this latter situation. 2. That the dislocation occurs commonly, not, as recently suggested, when the limb is abducted, but when the thigh is adducted, flexed, and inverted. 3. That the dislocation is not indirect, but direct, the head of the bone being driven through the rent in the capsule at the lower and back part of the joint, and then carried up to a variable extent by the force which caused the dislocation." If I might change the positions of the two words, indirect and direct, in No. 3, I could agree substantially with Professor Humphry's first and third conclusions. From the second I entirely dissent. On a fourth point I entirely agree with him, for he gives precisely the same *rationale* of the reduction of manipulation which I insisted upon—namely, that the head of the bone is *carried down* opposite to the rent in the capsule before any effort is made to turn it back into the acetabulum. Respecting the first conclusion, I submit that the lowest part of the capsule is behind the pubo-femoral ligament, and that in backward dislocations by *ab*duction it is not necessary, though it is not unfrequent, for this band to be either detached or ruptured. As a proof of the latter part of this statement, take the following description of the rent in the capsule in a case of dorsal dislocation during abduction, figured in my paper in the Royal Medical and Chirurgical Transactions for 1877. Place side by side with this the description of any one—it matters not which—of the three cases given in Professor Humphry's lecture. I will take the first, because it is the first, and is described as a case of dislocation on the dorsum of the ilium.

Case published in 1877.

"The rent commenced below the pectineo-femoral band, midway between the acetabulum and the femur, and ran (1) outwards and backwards to the neck of the latter, which it reached just above and behind the small trochanter, and (2) inwards and backwards across the thin portion of the capsule towards the acetabulum, which it nearly reached, a little behind the ischial border of the cotyloid notch. It thus formed two sides of a large opening, which was made quadrilateral in form by the detachment of the flap from the back of the femoral neck."

Prof. Humphry's Case.

"There was a valvular rent in the under and back part of the capsule, commencing just behind the pubo-femoral ligament, midway between the acetabular and the femoral attachments, as a single tear, which divided and extended upwards and backwards to the tuber ischii, and upwards and forwards to the trochanter near the attachment of the obturator externus; or it might be described as a tri-radiate rent, the rays diverging from the apex of the valve which was situated opposite the lower part of the tuber ischii."

Allowing for difference in phraseology, it will be seen that the rents in these two capsules were essentially the same. In both cases, by rising on to the dorsum ilii the head of the bone reached a much higher position than that at which it was forced through the capsule; therefore in both cases the position attained was *secondary* and by an *indirect* course. In his second case the head of the bone did not mount up so high, and the dislocation was therefore less *indirect*; it was, however, neither a dorsal nor an ischiatic dislocation, but, as Hamilton calls it, an "irregular" dislocation, *downwards and backwards*, upon the tuber ischii. This form of dislocation simply corroborates my arguments as to the general direction of dislocations; and how it can ever be used, as it has been, to refute

[1] Royal Medical and Chirurgical Transactions, vols. lx. and lxv.

them, I do not understand. The third case was a "regular" ischiatic dislocation or "dorsal below the tendon," and the rent in the capsule was such as I have produced any number of times by abduction; it was entirely confined to the thin part of the capsule.

Indeed, all three of Prof. Humphry's cases afford strong confirmation of my view as to the position of the rent in the capsule in hip dislocations. It would be almost impossible for any cases to correspond more completely than they do with my published description of the usual lesions of the capsule—namely, that the rent is confined to its thin portion, and takes a general course along the femoral attachment of this portion.

I am unable, within the limits of this paper, to discuss all Professor Humphry's arguments in favour of his second conclusion; but I cannot see that his cases afford any evidence whatever in support of it; on the contrary, two of them—the first and third—point to *ab*duction as having been the position of the limb at the time of injury, for a boy aged thirteen, riding on the back of a horse in a cart, and falling astride the shaft, and a man in the act of excavating a bank part of which falls upon him, are pretty certain to have their legs well separated. As to the position of the limb in the second case nothing can be inferred, because all that is said about it is that a lad aged thirteen was run over by a heavy cart. It is often impossible to learn what was the exact position of the patient when dislocation occurred, but in not a few published cases in which it is stated that the thigh was adducted, a careful consideration of the account given shows reasons for thinking that it was *ab*ducted. Referring to the position of the limb, Professor Humphry says "The probabilities, of course, are that a limb will be in a habitual or natural position when an accident occurs, and the position of flexion, *ad*duction, and *in*version, is both a habitual position, and is the one in which the head of the femur is pressed against the part of the capsule (the under and back part), and this is the part which gave way in the specimens before you." But Professor Humphry does not, and could not, mean to imply that *ab*duction is an unusual or an unnatural position; or that during *ab*duction the head of the bone is *not* pressed against the same thin part of the capsule, or that this is *not* the part of the capsule which gives way in dislocation by *ab*duction. I have proved both by experiments and by the lesions in accident cases that such are the results of *ab*duction, and these, at any rate, are points capable of being tested on the *dead* body. The degree of *ab*duction requisite to make the head of the femur press against the part of the capsule which gave way in Professor Humphry's cases is not great; *in every position* of abduction the head of the bone projects beyond the lower edge of the socket, and in some it is more than half out of the acetabulum. But the degree of flexion, *ad*duction, and inversion necessary to make the head of the femur press against the same part of the capsule is extreme, and the attitude resulting therefrom is neither a habitual nor a natural one, with most persons.

I could refer to several instances of traumatic dorsal and ischiatic dislocations which occurred during *ab*duction; two[2] will suffice here. Guersant well describes a case of ordinary dorsal dislocation, and states that the thigh was dislocated by a forcible movement of *abduction and inward rotation*. Crawford reported a case of double dislocation in a miner aged thirty-six, who was standing on an incline "*with his feet widely separated*, the right one being much lower (and therefore much less flexed) than the left, and the body bent forwards. *While in this position* a large mass of rock fell upon his dorsal region, bending his body upon the thighs and pressing him forcibly down upon the rock on which he was standing." The man was certain that both joints were dislocated at the same instant; the right was a dorsal, the left an ischiatic dislocation. Such cases as these cannot be put aside as inconclusive or insufficient. Such a position as this miner was in is one of the most natural and frequent; the forms of dislocation were theoretically and practically perfect.

As to Professor Humphry's third conclusion, I confess my inability to understand it; for I do not know how a dislocation can be other than *indirect* if the head of the bone is "*carried up to a variable extent*," no matter by what force, *after it has left the acetabulum*.

It is, however, a great gain to find a teacher so eminent as Professor Humphry pointing out that in the backward dislocations of the hip the rent is in the *lower* and back part of the capsule; and granting that dislocation is easily caused, in the dead body, by forcible *ab*duction of the limb. But I regret to see he is of opinion "that the view formerly entertained is correct—namely, that the backward dislocations of the hip, whether accompanied by fracture of the edge of the acetabulum or not, are commonly direct, and produced by force applied to the limb in its flexed, adducted, and inverted position." It was this view which led to attempts at reduction by pulleys. It was this view which kept alive the idea that the head of the bone, having passed *directly* back to its abnormal position, must be pulled right again by traction in the axis of the displaced limb. It was this view which sanctioned the barbarous practice of bleeding, tartar emetic, and enormous traction force of hundreds of pounds' weight, continued over several hours. And it was this view which caused large extravasations of blood, and abscesses, around the joint, and even death itself—results such as Professor Humphry, and not a few surgeons besides, witnessed in the comparatively recent past; results which were the outcome of the ignorance of, or an indifference to, the position of the rent in the capsule in hip dislocations. It is this view which, to my thinking, Professor Humphry himself, in his lecture, takes care to explain ought not to be acted upon; for he describes the *rationale* of reduction by manipulation upon the opposite view—the view, namely, for which I contend.

I have good reasons for knowing that during the last ten years a great deal of the instruction given, in London at least, on dislocations of the hip, has been clearer and simpler than it was before. This better understanding is probably much more due to an accurate knowledge of the position of the rent in the capsule than to the fact that dislocations of the hip occur during *ab*duction.

There is, however, this value in knowing that *ab*duction is the simplest and commonest position which favours dislocation; it explains why the rent in the capsule is always in the thin part and below, and why three of the regular forms of dislocations of the hip are (with the rarest, if any, exceptions) indirect or secondary, and that *some* of the other forms are direct only because the head of the femur *remains below*, opposite the rent through which it was forced. It is always desirable to have a reasonable explanation of the success of our treatment, and, as regards reduction by manipulation, this is only to be found in a knowledge of the position of the rent in the capsule, and of the direction taken by the head of the bone after it leaves the acetabulum. In other words, by knowing that in pubic and in dorsal and sciatic dislocations (when not complicated by fracture at the hip-joint), the head of the bone, having been driven down through the thin lower part of the capsule, ploughs its way up outside the acetabulum, and over the deep muscles, to its new position on the pubes, the dorsum ilii, or the ischium; and that the surgeon has to make it retrace its steps—first, down to the rent in the capsule, and then through this rent into the acetabulum. This is the lesson of practical and surgical importance which is taught us by a complete study of hip dislocations, and this fact we all now act upon, whatever may be our individual views of the position of the limb at the moment of luxation.

[2] The references to these and other cases are given in the article on "Injuries to the Lower Extremities" (ed. 3, vol. i., p. 1062, &c.), in Holmes' and Hulke's System of Surgery.

AN EXPERIMENT IN HOSPITAL PAY SYSTEM.

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SENIOR ASSISTANT-SURGEON TO THE WESTERN OPHTHALMIC HOSPITAL.

So much has been recently written and spoken concerning the theory of the pay system in hospitals that an appeal to actual experience may be both refreshing and instructive. It would be difficult to find a better example of the changes which ensue upon the adoption of the paying system at a hospital, in the number of new cases, in the attendances of the old, and in the receipts and expenditure, than that which we are about to present.

The Western Ophthalmic Hospital was founded in 1856 and is situated in the Marylebone-road. Until the year 1874 it was free to all comers; since then the pay system has been in vogue. From the reports for the last sixteen years we have abstracted the statistics of in-patients, out-patients, attendances of the latter, together with the donations and subscriptions, the patients' payments, and the expenses, from 1870 to the present time, and have arranged them in the appended table in parallel columns. The years which appear in this table are naturally divisible into two periods, owing to "important changes in the management of the hospital,"[1] which took place on Nov. 16th, 1874. Prior to that period "the hospital was free to all comers. Hundreds of poor persons, many of whom came from distant parishes, availed themselves month after month of the benefits thus offered. The institution soon became known as a place where sufferers could obtain both gratuitous relief and successful treatment, each year showing a large increase in the number of patients—1573 new out-patients in 1870 to 2316 in 1874."[2] The committee justly regarded this result as "a proof of the success of their labours," but owing apparently to a pressing financial difficulty, accentuated for the time by the need of extensive repairs, involving the outlay of £300, the committee gave notice that from the "16th of November, 1874, a payment of sixpence per week would be required from each out-patient, and a proportionate sum from each in-patient."[3] No one, however, was to be turned away for want of money. It was not likely that the hundreds of poor from distant parts, who in past years had become acquainted with the gratuitous advantages of the hospital, would immediately become aware of this fundamental innovation. The committee, failing to make allowance for this, and instituting a comparison between the patients' attendances during three months following the new rule, and the same period in the previous year, "rejoiced to report the thorough success of the experiment. The patients have not only subscribed their weekly sixpences with cheerfulness, but have, contrary to the fears of the committee, attended in increased numbers,"[4] and gave the following figures:—

	1873-4.	1874-5.
Patients' attendances, Nov. 16 to Feb. 13...	2662 ...	3073
Cash receipts from patients.....	Nil ...	£53 11*s.* 4*d.*

The committee, moreover, found herein "reason to look for a yearly addition to their funds of a sum more than equal to the present total of their annual subscription list." Such sanguine expectations were, however, speedily dispelled by actual experience, and in the next report (1875) the committee regretted that "the hope that the attendances of patients would not be reduced by the adoption of the paying system had not been realised."[5] The regret was only too well founded, and the figures show a steady decline in the number of new out-patients from 2316 in 1874 (the year of introduction of pay system) to 1467 in 1881, and of attendances of patients from 13,677 in 1874 to 5746 in 1881, the new patients being reduced by one-third and the attendances by more than a half. Whether the result of the paying system was desirable or not, it was at any rate the very reverse of the expectation of the committee, and the pay system commenced upon the plea of economy was justified, and continued "to preserve the self-respect of the patients,"[6] and in the hope that kindred institutions would follow the example of this "bold experiment."[7]

Unfortunately such reciprocity has not commended itself to other charities to any great extent, and the only result of the compulsory paying system has been to turn away from our doors a large number of patients, who fail to see the force of paying here for that which they can receive gratuitously elsewhere. While fully agreeing with the principle that patients able and willing to pay should be permitted or even requested to do so, we believe that unless the Western Ophthalmic Hospital is to be content with its position as the smallest of the five eye hospitals in London, and to allow its hold on the public to further decline, or at best remain stationary, this fettering regulation of compulsory payments must be reconsidered.

We would point out that, as a mere question of economy, a larger attendance does not imply increased outlay, the cost of the treatment of out-patients being ridiculously small. Thus, in the year 1874 the attendances were 13,677, and the expenses £635 11*s.* 6*d.*; in the year 1884 the attendances were 5186, and the expenses £624 5*s.* 6*d.* Evidently the expenses do not vary with the attendances. Moreover, the paying system reacts upon the receipts after the manner of a self-denying ordinance, for, as pointed out by the committee in their last report, "the very circumstance of a self-supporting element in the administration of this hospital deprives it of a portion of the grants that might be apportioned to it were its doors freely open to all in-comers."[8]

A survey of the appended table will suggest the following general conclusions: 1. The patient's attendances, which had steadily increased under the free system, have greatly declined under the pay system. 2. The in-patients are too small in number to permit much weight to be attached to their fluctuation; but the average for five years of the free system was 64; for eleven years of the pay system, 50. 3. The third column is perhaps the most instructive and valuable as a gauge of hospital success. It shows that the steady increase of new out-patients which the free system fostered received a shock by the introduction of payments, which continued for twelve years, while during the last three the increase of cases of eye disease in an increasing population has made itself felt in our hospital in spite of the depressing influence of the pay system. 4. The conclusion to be drawn from the financial receipts is not favourable to the view that the paying system is supported by the alms-giving public. It would seem that the more a hospital seeks to help itself out of patients' pockets the less is it helped by others; and the desire to assist a partially self-supporting charity does not appeal to the charitable sentiment so much as the benefaction of the indigent. 5. The expenses do not appear to vary with the number either of in- or out-patients, or the attendances of the latter, and were not far different in 1873, when the number of in-patients was 86, out-patients 2004, and attendances 14,417, from what they were

Statistics of the Western Ophthalmic Hospital under the Free and Pay Systems.

	Year.	Attendances.	In-patients.	New out-patients.	Donations and subscriptions.	Hospital expenses.	Patients' payments.
					£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
Free System.	1870	11,762	71	1573	847 8 11	800 2 5	—
	1871	12,085	69	1651	534 8 9	745 13 7	—
	1872	12,534	59	1941	523 6 3	552 9 10	—
	1873	14,417	86	2004	524 2 10	662 14 6	—
	1874	13,677	37	2316	623 11 7*	635 11 6	—
Pay System.	1875	11,406	76	1782	434 13 4	889 4 3	235 3 2
	1876	7063	15	1633	501 16 6	620 10 9	136 6 0
	1877	8980	44	1677	499 16 0	777 12 8	157 0 5
	1878	7910	46	1608	364 8 7	488 17 4	129 10 11
	1879	8083	64	1616	302 18 2	574 18 7	175 2 3
	1880	7117	53	1467	307 12 4	589 12 11	183 4 1
	1881	5746	30	1473	354 15 10	545 3 7	114 2 6
	1882	5161	55	1478	358 1 2	646 0 4	208 13 3
	1883	5094	60	1666	375 5 4	634 10 7	183 6 6
	1884	5186	53	1734	331 6 8	624 5 6	164 19 6
	1885	5186	54	1813	345 0 6	586 19 5	156 2 6

* Including special donation of £150.

[1] Report for 1874, p. 5.
[2] Ibid., p. 7.
[3] Report for 1875, p. 7.
[4] Ibid., p. 6.
[5] Ibid., pp. 7, 8.
[6] Report for 1876 p. 9.
[7] Ibid
[8] Report for 1885, p. 11.

in 1882, with 55 in-patients, 1478 out-patients, and 5161 attendances. 6. The patients' payments fluctuate unaccountably and in ratio with no other varying quantity. Thus, in 1881, with 1473 out-patients, the receipts were £114 2*s.* 6*d.*, and in 1882, with 1478, they were £208 13*s.* 3*d.*—a difference which an excess of 25 in-patients in the latter year might possibly partially explain, but for which it is totally inadequate to account.

An effect of the pay system which figures cannot show, but of which the medical staff are painfully aware, is that cases of unusual interest, and operation cases generally, are repelled from our doors to be received with open arms elsewhere. One advantage may indeed be claimed for the paying system by way of reducing the attendances of chronic cases where treatment is of no avail, and perhaps in choking off a class of ailments pretty universally recorded as *nihilitis*. From the point of view of medical and surgical practice, then, the adoption of the compulsory paying system, so long as it is not universal, is undesirable and to be condemned; it is questionable whether voluntary payments might not yield almost as large a sum, and would be at least as well calculated to preserve the self-respect of the poor and increase their respect for the charity.

LITHOLAPAXY IN MALE CHILDREN AND MALE ADULTS.

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(*Continued from page 1125.*)

IF space permitted, I might relate the history of several other interesting cases from the series of litholapaxies detailed in the table (*ante*, p. 1069). I have now, however, I consider, produced sufficient evidence to prove that the calibre of the urethra in male children is as a rule much larger than surgeons have hitherto believed to be the case. Amongst the many objections raised against the advisability of performing litholapaxy in boys, there is really only one which is worth much consideration in practice, and that is the hitherto assumed smallness or narrowness of the urethra. The fact is that the whole question of the feasibility of performing litholapaxy with success in male children hinges on the size or calibre of the urethra in these young patients. Mr. W. J. Walsham was the first, as far as I know, to perform litholapaxy pure and simple, in England, on boys. In bringing forward for discussion at the meeting of the Clinical Society of London held on April 9th last the history of a case in which he had successfully performed litholapaxy on a boy aged ten, he stated that experiments instituted by him confirmed the truth of my experience of the size of the urethra in male children. This experience has been gained in the performance of forty-seven litholapaxies with my own hands in this class of patients, and I do not know how I could have gained it in a more practical way. In the table of litholapaxies (*ante*, p. 1069) there are several cases detailed in which I was able to pass a No. 7 lithotrite into the bladder of boys of only two years old, and there is one case of a boy aged one year and nine months into whose bladder a No. 7 lithotrite was passed. I have met with a case in which I have been able to pass a No. 7 catheter into the bladder of a boy of only eleven months old. This case was as follows. In August, 1885, a mother brought her male child, aged eleven months, to the Indore Hospital, labouring under symptoms of stone. The child was the subject of phimosis, which I considered the cause of these symptoms. Being placed under chloroform preparatory to performing the operation for the cure of phimosis, I considered it advisable to clear up any doubts existing in my mind as regards the cause of the stone symptoms, and passed a No. 7 catheter with ease into the child's bladder. I then attached an aspirator, but could detect no click. The phimosis was cured, and the symptoms of stone soon passed away. But had I found a small stone in this case, I should certainly have crushed it with a No. 6 lithotrite and evacuated the débris through the No. 7 evacuating catheter. I should say that in many cases a No. 6 catheter will readily pass into the bladder of a child of one year old, and with a lithotrite and evacuating catheter of this size it is quite feasible to dispose of a fair-sized stone in half-an-hour. On the other hand, I have often met with cases of boys of two years of age suffering from stone into whose bladders it was impossible to pass a No. 6 catheter, and in such cases I have of course performed lateral lithotomy. In dealing with cases of stone in young boys, I do not as a rule decide the kind of operation I shall perform until the little patient is placed under chloroform. If I find that the urethra will admit a lithotrite sufficiently powerful to crush the stone to be attacked, I almost invariably perform litholapaxy; and if not I perform lateral lithotomy. I have, however, on one occasion begun the operation of litholapaxy, and after proceeding some way in this operation considered it wiser and safer to extract the stone by lateral lithotomy. But this was in the days when I was not well supplied with small fully fenestrated lithotrites. The case is an interesting one, and, briefly stated, is as follows. K——, a boy aged eight years and a half was admitted into the Indore Hospital on April 28th, 1884, suffering from symptoms of stone for three years and a half. The same day I passed with comparative ease a No. 7 lithotrite into the bladder, and at once seized a stone. After a few crushings I withdrew the lithotrite (which was not fenestrated) from the bladder, and in doing so I experienced considerable difficulty in getting it to pass through the membranous portion of the urethra, as the blades had become clogged with the débris of a soft, clayey stone. This clogging had the effect of increasing the size of the lithotrite from a No. 7 to a No. 8. Fearing that this clogging might occur on a second withdrawal of the lithotrite from the bladder, I determined to cut the boy, and, passing in a No. 5 staff, performed lateral lithotomy, making a very small cut in the prostate, and extracted the broken fragments of stone from the bladder by means of an ordinary dressing forceps. The stone weighed 127 grains, and was composed of mixed phosphates and urates. The boy made an excellent recovery, and left the hospital well on May 11th. Here was a boy, aged eight years and a half, with a far less capacious urethra than I have often found to exist in a child of three or four years old.

At starting, I stated that I advocate litholapaxy in male children principally for two reasons—rapidity of cure and absence of a cutting operation. An analysis of the table appended shows that the average number of days spent in the Indore Hospital by boys after litholapaxy was a little over seven. The surgical records of this hospital in past years show that the average number of days passed by boys in hospital after lateral lithotomy was 17·61, and from what I have been able to learn of the statistics of other hospitals in India, it would appear that boys generally remain nearly twenty days in hospital after lateral lithotomy. Now, an average stay in hospital of but seven days after litholapaxy does not fully represent the advantages gained by the patient in having his stone removed by this method. The table does not show the fact that many of these young patients were practically well the day succeeding the operation, and that they were very often only detained in hospital for the purpose of observation. Indeed, some of them were walking about the wards of the hospital the day succeeding the operation. Any lithotomist who has cut many boys for stone will readily recognise the advantages inherent in a method of surgical procedure wherein so much suffering, annoyance, and personal inconvenience can be safely avoided. Rapidity of cure in itself would not of course be a sufficient reason for performing litholapaxy in boys, unless rapidity of cure were accompanied by successful results. And such results I have obtained. Some surgeons would include Case 53, where death was caused by epistaxis and general anæmia some three weeks after all troublesome urinary symptoms had disappeared, amongst the number of unsuccessful litholapaxies. I do not myself think that this case should appear in this category. But, granting that it should so appear, I have still only lost two cases out of fifty-eight, or something under 3½ per cent., which is a rate of mortality considerably less than that usually following the operation of lateral lithotomy in boys in England. I have not selected my cases, but took them as they came. Some of the boys operated on were in a very weakly state of health, and not a few suffered from chronic malaria with enlargement of the spleen. The operation of litholapaxy in boys cannot of course be free from all risks to life, no matter how skilfully performed; and should extensive organic disease of the kidneys coexist with stone in the bladder, there must of necessity be always a certain percentage of mortality after such an operation. But I maintain that if suitable instru-

ments are skilfully and judiciously employed in performing litholapaxy, this operation will be found to be a much more rapid and a somewhat more successful method of dealing with stones in male children than lateral lithotomy. I advocate litholapaxy in preference to lateral lithotomy in dealing with stone in boys for another and very important reason—viz., the absence of a cutting operation.

The operation of litholapaxy, in the performance of which no important structures are cut or wounded, has much to recommend it, more especially in a country like India. A native of India will not, as a rule, undergo any grave surgical operation for the cure of disease until he has tried all other methods of treatment; and he will be even still more loth to submit his child to the terrors of the surgical knife unless he be fully persuaded that an operation is an unavoidable and absolute necessity. He will procrastinate and put off what he considers the evil day to the last hour. And hence it is that surgeons in India are continually meeting with cases of very large stones in young boys. But when the native of India comes to learn, as he is already slowly beginning to do, that in certain hospitals a stone can be disposed of without a cutting operation, he will then seek surgical aid for his child as soon as stone symptoms manifest themselves. I am strengthened in this belief by the fact that at the Indore Hospital the number of admissions into hospital on account of stone amongst boys has steadily increased since litholapaxy has become an established and a recognised operation at this institution. I am sanguine enough to hope that when the prejudices and opposition which have hitherto existed amongst surgeons in India against the operation of litholapaxy in boys shall have disappeared, and when this method of treating stone in boys shall be more generally adopted than it is at present, we shall then more rarely meet with cases of large stones in young male children. And should this operation become an established and widely recognised method of treating stone in boys, its adoption in this class of patients will mean an avoidance of an amount of pain and misery which can be only fully realised by those who are intimately acquainted with the daily lives of the Indian peasantry, cut off as they often are from frequent communication with large towns or cities where hospitals and dispensaries flourish. A glance at the table shows that many of the boys operated on at the Indore Hospital had suffered for four or five years from stone before they sought surgical relief; and I feel certain that many unfortunate Indian boys, living in villages far removed from skilled surgical aid, drag out a miserable existence for some years, and eventually perish with the stones in their bladders. The method of treating stone in boys by supra-pubic cystotomy is not very likely to find much favour amongst the natives of India, and I think that surgeons in India will be slow to adopt it amongst this class of patients. I do not think that surgeons practising in India very generally share Langenbeck's opinion, that the operation of lateral lithotomy in boys is frequently followed by emasculation. The natives of India have certainly not generally noted this after-consequence of lateral lithotomy; and should they ever come to do so, they will at once abandon this time-honoured operation for litholapaxy, or for even supra-pubic cystotomy, although the latter is a cutting operation. They will do so chiefly on religious grounds, for in no other country in the world is the hope of male offspring so intimately interwoven with religious aspirations and practices as it is amongst the natives of our great dependency. I am not in a position to deny or confirm the truth of Langenbeck's statement, for this question I confess has not as yet engaged my attention. It is extremely difficult in a country like India to follow up the life-histories of boys cut for stone at public hospitals, for in India, as in Europe, we meet with stone in boys nearly always amongst the poorer classes of society, and the "short and simple annals of the poor" are not easily traced. Still, the difficulties of collecting the necessary information to settle this very interesting and important question, so far as it refers to Central India, are not insuperable, and on my return to India I shall endeavour to trace the life-histories of all boys cut for stone in past years at the Indore Hospital. The impossibility of wounding the ejaculatory ducts in performing supra-pubic cystotomy would seem, however, to be the principal advantage it possesses over lateral lithotomy in dealing with cases of stone in male children. It may perhaps be an easier method of removing a stone from the bladder of a very young male child than lateral lithotomy would seem to be for those who do not enjoy many opportunities of cutting for stone in boys. I say it may be an easier method advisedly, for I have my doubts on this point. I am inclined to think that the "high" operation in a fat male child of two years of age might possibly be not so easy of performance as the advocates of supra-pubic cystotomy would have us believe. But it will not prove a more expeditious, and it can hardly prove a more successful, method of dealing with stones in boys than lateral lithotomy is well known to be when performed by an experienced and skilled hand. Freyer's brilliant and unequalled success in cutting 143 boys for stone without a death has conclusively shown what splendid results can be achieved by lateral lithotomy when this operation is skilfully performed. On the other hand, the total number of supra-pubic cystotomies performed on boys in England up to the present date is so very small that it is as yet impossible to draw any safe conclusions as to what its rate of mortality is likely to be, and therefore I think I am warranted in expressing my conviction that surgeons practising in India will be slow to abandon lateral lithotomy for supra-pubic cystotomy when dealing with cases of stone in male children. Before leaving the subject of litholapaxy in boys, I should like to make a few remarks of a practical nature.

The operation of litholapaxy in boys differs from the same operation in the adult male only in the size of the instruments employed. Great gentleness and a light hand are essential to success. The evacuating catheters should be as short as possible, and they should be fitted with stilets; for although some authorities state that a fragment of stone impacted in the eye of the catheter is easily removable by briskly working the aspirator, I have on many occasions found that this manœuvre fails to dislodge a tightly wedged fragment. The employment of a stilet then becomes a necessity. The evacuating catheter should never be withdrawn from the bladder with the aspirator attached to the catheter, because in doing so the operator has no means of knowing whether a small fragment of stone is lodged in the eye of the catheter or not; and should a piece of stone project from the eye of the evacuating catheter, the urethra might be lacerated in the withdrawal of the catheter from the bladder. It is, therefore, a wise plan to always pass the stilet into the catheter before withdrawing the latter from the bladder. All lateral and up-and-down movement of the lithotrite should be avoided as much as possible, so as not to strain the neck of the bladder. It is scarcely necessary to say that no undue force should be employed in passing either a lithotrite or evacuating catheter into the bladder. The meatus of the urethra should be incised only when it is considered necessary to do so. The operation very often lasts a considerable time when a stone of considerable size has to be dealt with; for, since the evacuating catheters employed are comparatively small, the stone must be crushed very fine to come through the eye of the catheter. But the surgeon should be in no hurry to finish the operation, and no particle of débris should, if possible, be left behind in the bladder. The aspirator should be freely employed. I think that the performance of this operation in young male children requires a greater amount of skill and dexterity than the same operation in the adult male. But the difficulties are, after all, not very great, and the surgeon who has performed a few litholapaxies in the adult male with success may then safely proceed to operate by this method in young male children. Whoever wishes to give litholapaxy in boys a fair trial must supply himself with a set of completely fenestrated lithotrites, beginning at No. 6 and running up to No. 10 (English scale). To recapitulate. Use completely fenestrated lithotrites suited to the calibre of the urethra; if possible, crush the stone in the bladder into fine powder, and you will not then require to use large evacuating catheters; never use a lithotrite or an evacuating catheter which will not pass readily in and out of the bladder; be extremely gentle and careful in practising all manipulations in the bladder and urethra; do not be in a hurry to finish the operation; use the aspirator freely, and never, if possible, leave a single grain of débris behind in the bladder. If all these conditions be fulfilled, you may count on a large measure of success. Some cases you will meet with where no lithotrite, however small, can be employed with safety, and these are the cases which should be dealt with by lateral lithotomy.

Having now considered the operation of litholapaxy in its application to the treatment of stone in male children, I should like to touch on some points of present interest connected with its performance in the adult male. It would

appear that whilst surgeons in India are endeavouring to widen the sphere of litholapaxy their brethren in Europe, and even in America, seem inclined to restrict Bigelow's operation to very narrow limits. This divergence in opinion and practice between the East and the West has doubtless been brought about by the increasing favour now being accorded to the operation of supra-pubic cystotomy in its revived form. I have had no practical experience of the "high" operation; but, in common with most surgeons, I recognise the fact that in its latest development it is eminently adapted to the treatment of very large stones, which cannot be disposed of by litholapaxy or by perineal lithotomy. And in dealing with cases of tumours of the bladder and encysted stones, no matter what their size may be, it is doubtless the correct method of surgical procedure. It cannot, however, be said that there exists a universal consensus of opinion amongst practical surgeons at the present day as to where we should draw the boundary-line between litholapaxy and supra-pubic cystotomy. I certainly am not disposed to draw this line at a stone which is hard and much above an ounce, and I feel certain that my brethren in India, with their unrivalled opportunities of treating stone, have no intention of adopting a course of practice which I can only characterise as retrograde.

The size, density, and weight of a stone must be carefully considered when drawing the boundary-line. But the size, density, and weight of a stone are not the only important points of the problem to be solved. The size and the general condition of the bladder and prostate, together with the size or calibre of the urethra, are equally important points for consideration before we can arrive at any safe conclusion as to the method of treatment best adapted to each individual case. Indeed, no operator can tell with anything approaching accuracy the weight of a stone in the bladder when grasped between the blades of a lithotrite. The weight can only be determined after its evacuation from the bladder, and its density can only be learned during the progress of the operation. And, therefore, rules laid down to guide inexperienced surgeons in drawing the boundary-line between litholapaxy and supra-pubic cystotomy based solely on the weight and hardness of a stone must prove valueless and misguiding in actual practice. For it often happens that a stone of moderate size lying in an irritable, contracted, and diseased bladder will give the operator much more trouble than a stone weighing upwards of three ounces will do, in a roomy and healthy viscus. Again, there are some cases, happily rare, wherein the bladder continues to contract during the whole course of the operation, grasping with spasmodic effort the lithotrite, impeding its working and ejecting the water thrown in by the aspirator. These are certainly the most difficult cases we meet with in practice, and should the novice in performing litholapaxy be so unfortunate as to come across a case of this kind, it will give him an exaggerated idea of the difficulties to be met with in performing litholapaxy in the ordinary run of cases. It requires all the patience, care, and skill which an experienced hand can command to combat such conditions as these. Indeed, it is a question for consideration whether even an experienced litholapaxist would not better consult the safety and welfare of his patient by having recourse to perineal or supra-pubic lithotomy when brought face to face with a case of this kind, more especially if the stone happens to be at all large. I am, however, of opinion that any uncomplicated stone on which the surgeon can lock a trusty and efficient lithotrite can in most cases be crushed and evacuated from the bladder at one sitting. By an uncomplicated stone I mean one not complicated by an enlarged and diseased prostate, and which lies free in a healthy and roomy bladder. I can, of course, imagine a case in which the surgeon, having locked his lithotrite on a very hard mulberry calculus, weighing between two and a half and four ounces, would fail to break it; and I can also imagine a case in which the surgeon, having broken across a large stone, would still be unable to evacuate it at one sitting owing to the inability or unfitness of the patient to remain sufficiently long under an anæsthetic to permit of the operation being completed at one sitting. But putting aside exceptional cases such as these, I think that, using efficient modern instruments, the surgeon ought to be able to dispose of any uncomplicated stone on which his lithotrite will lock, at one sitting. I would go even further, and say that some stones on which a lithotrite will not in the first instance lock can be reduced in size to the working capabilities of the lithotrite by judicious chipping of the outer covering of the stone, and that then the operation can be completed at one sitting. In dealing with cases of large, soft, phosphatic stones this chipping process is quite feasible. I shall now endeavour to substantiate these views by relating the histories of some cases from my own practice at the Indore Hospital.

M. S——, forty-nine years of age, suffering from stone symptoms, was admitted into the Indore Hospital on Dec. 16th, 1884. He suffered from emphysema of the lungs; his heart was weak, and he was very corpulent. His muscular system was very flabby. Urine acid; specific gravity 1014; no albumen. On Dec. 17th he was placed under chloroform, which he took very badly. Equal parts of chloroform and ether were then tried. The largest lithotrite which could be used with safety was a No. 12 fenestrated. The stone was readily seized, but the inspiratory and expiratory efforts were so deep and laboured that the water injected into the bladder was soon expelled, and so the bladder kept continually contracting on the lithotrite, rendering the operation most difficult and tedious. A No. 14 evacuating catheter (English scale) was the largest I was able to employ. The lithotrite was introduced sixteen times, and the operation lasted two hours and thirty-five minutes, although the stone, mixed lithic acid and phosphates, only weighed 272 grains. This will give some idea of the difficulties attending the operation of litholapaxy in this case. Again and again I was obliged to cease working the lithotrite and aspirator in the course of the operation, owing to the frequent spasmodic contractions of the bladder. I have frequently removed stones weighing between two and three ounces with far less difficulty than I experienced in this case.—Dec. 19th: Pulse 120; evening temperature 104°; suffering from an attack of asthma; right testicle swollen; some pain on pressure over bladder.—22nd: Feels burning at time of micturition; condition of testicle unchanged; sounded bladder with Sir H. Thompson's sound, but no fragment of stone could be detected.—26th: Does not sleep well; pain in epigastric region; getting weaker; has difficulty in breathing; had two fits of asthma.—27th: Dyspnœa increasing; pulse rapid and weak; becoming drowsy. Died during the night. No post-mortem examination was obtainable.

I ascribe the fatal issue in the foregoing case to the lengthened administration of chloroform and ether in a patient suffering from emphysema of lungs and weak heart. If I were again to meet with a similar case, I should most certainly perform either perineal lithotomy or supra-pubic cystotomy in preference to litholapaxy, for I consider that litholapaxy is contra-indicated in cases where a contracting bladder keeps on continually grasping the lithotrite and expelling the water injected by the aspirator. We have performed ninty-three litholapaxies in boys, men, and females at the Indore Hospital between May, 1884, and the end of March, 1886, and this case is the only one amongst this large number of litholapaxies which has proved fatal. Indeed, I am disposed to think that, had I used no anæsthetic, and had performed lithotrity instead of litholapaxy in dealing with this stone, the result might have been different from what it was. The history of this case goes to prove how valueless in actual practice are the rules which have been laid down to guide us in drawing the boundary line between litholapaxy and supra-pubic cystotomy, rules which are based solely on the weight and density of a stone.

(To be concluded.)

ON HYSTERICAL AFFECTIONS.

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IN THE LANCET of Sept. 18th is an interesting report by Dr. Suckling of a case of what he terms "paralysis depending on idea." Whether the difference between the cases denominated by this somewhat cumbersome phrase and those of so-called hysteria is fanciful or not eed not concern us much at present. Dr. Suckling thinks that there is a difference in the character of the patient, and perhaps he is right. That such cases are "hysterical" in the literal sense of the word no one for a moment supposes. That much-slandered organ, the uterus, has quite sufficient responsibility in carrying out its normal functions without

being saddled with all the ills which we are unable to localise in any of the other organs of the body. The term "hysterical," however, as applied to these cases, is a convenient one, and will probably continue to be used. There is no class of cases which yield such satisfactory results when judiciously treated as these hysterical affections. On the other hand, if not properly managed, there is no class so difficult to benefit in any way. We hear a good deal of the *vis medicatrix naturæ*, and no doubt physicians gain a good deal of credit which really belongs to nature; but in the cases now under consideration nature is a most hopeless failure, and the physician achieves his greatest triumphs. With regard to the difference in disposition alluded to by Dr. Suckling in patients of this class, some being cheerful, intelligent, and anxious to recover, others just the reverse, the same difference is equally noticeable in patients suffering from other diseases. One thing, however, should not be forgotten, which seems to me to have a decided influence on this point, and that is the length of time the affection has existed. If it has been in progress for months or years, the patient has naturally become depressed and given up all hope of recovery; perhaps she has been under the care of many medical men, and owing to unfavourable circumstances has received no decided benefit. With regard to treatment, if possible it is always better to remove the patient away from her friends, whose injudicious sympathy tends to counteract all beneficial remedies. My own experience is that these cases do better in a hospital than anywhere else, where you have a reliable nurse, who will take an interest in the patient and carry out all your directions. They require so much time and attention that it is almost impossible for a busy practitioner to carry out the treatment effectually. The next step is to gain the confidence of the patient, and not only to impress on her that she will get well, but also to prevail on her to use her utmost efforts in this direction, and to encourage her when we really see that she is making such efforts. The following three cases will serve to illustrate some of the curious phases of this very interesting affection. They came under my notice at the Torbay Hospital. I will state them as briefly as possible.

CASE 1.—Harriett B——, aged forty, unmarried, dressmaker, was admitted into the hospital on Feb. 22nd, 1883. She had always been a very emotional subject. Three years before admission the left breast was removed at the Middlesex Hospital for scirrhus. She had been in bed eleven weeks before admission. She complained of pain in the left thigh and leg; there was no swelling; the muscles were slightly wasted; the left lower limb was completely paralysed, and she could not move it in the bed; there was partial anæsthesia of the whole limb, most marked on the inner side of the thigh; she was anæmic in appearance. She was put on strychnine and iron; the leg was faradised daily, and blistered in a few places with the thermal hammer. In three days she was walking on crutches, a few days later with a stick only, and soon was able to walk without any support at all. She had some difficulty at first in getting up and down stairs, but was made to practise it several times in the day. She gradually improved in health and strength, and was discharged on May 21st, when she could walk several miles a day.

CASE 2.—Mary W——, aged twenty-five, formerly a servant, was first seen by me in consultation with Dr. Wills about the middle of February of last year. She had been in bed for five years, and had to be lifted from one bed to another. She was a most pitiable object, emaciated, peevish, unable to stand or walk or feed herself. She could move her legs in bed, but in getting her out of it they gave way under her, and she would have fallen if not supported. I offered to take her into the hospital, telling her that she would get perfectly well. She objected very much, and said she did not want to get well. After much persuasion she consented to come in, and was admitted on Feb. 24th. On admission I ordered her milk and beef-tea at first, as she had taken nothing but slops for some time. She was faradised and rubbed every day. On the third day I ordered her a mutton chop; this she obstinately refused to eat, saying she could not swallow it. On being informed of this by the nurse, I went up into the ward, cut the chop into small pieces, and insisted on her eating it, threatening to apply the battery if she would not do so. After a good deal of trouble she ate the whole of it, with some bread and a cup of milk. After this we had no further trouble about her food and she was put on a liberal diet. On the fifth day she was out of bed, and able to walk a little when supported on each side by a nurse; a few days later she could walk with crutches in the garden. She gradually gained flesh and strength, and was discharged from the hospital seven weeks from the date of admission, able to walk two or three miles in the day. She then went for a few weeks to a convalescent home in the country, and returned much benefited by the change.

CASE 3.—Mary T——, aged twenty-one. I first saw this patient with Dr. Eales on July 11th of the present year. She had been in bed or on a couch for three years, and was considered by her friends to be suffering from heart disease and consumption. She was very emaciated, and could not stand without being supported; her breathing was rapid and noisy, and she jerked out her words in a spasmodic manner when answering questions, which she rather whispered than spoke. She complained of pain over the region of the heart, which was beating quickly and feebly; the sounds were natural; breathing jerky, but nothing abnormal about the lungs. We recommended her friends to send her into the hospital, and promised that she would get quite well. She was admitted under my care on July 13th. Her weight on admission was 67 lb. She was faradised and rubbed every day, given as much good nourishing food as she could be made to eat, and ordered cod-liver oil and iron. As in the previous case, she was got out of bed, and walked at first with support, and very soon by herself. A small blister was placed over the region of the heart, which removed the pain she complained of. The breathing soon became natural. She rapidly gained flesh, strength, and weight. In a fortnight she was able to take good walks. She was discharged on September 16th, and sent to a convalescent home on the Moor. Her weight on leaving was 80 lb., having gained 13 lb. in rather more than two months.

The above cases are examples of many to be met with in practice. Whatever name we may apply to them—real, ideal, hysterical, or neurotic,—they are all of them very amenable to treatment, are extremely interesting to watch, and amply repay in their satisfactory termination the time and trouble devoted to them.

Torquay.

CASE OF

IMPERFORATE HYMEN WITH RETENTION OF MENSTRUAL FLUID.

BY HENRY DAVY, M.D. LOND., M.R.C.P.,
PHYSICIAN TO DEVON AND EXETER HOSPITAL.

MARY F——, aged fourteen, was admitted under my care on April 24th, 1883. In the previous October she began to suffer from pains in the back and thighs, which caused her to stay in bed for one week; after this she got better, but for two or three months past the pains have increased in severity. She never noticed any periodical recurrence of these pains, and her mother attributed them to rheumatism. She had never menstruated. She is a well-developed, healthy-looking girl. I first saw her on the morning of April 24th, but having an appointment in the country, and her case being apparently of no urgency, I did not pay much attention to her symptoms. At 9 P.M. the same evening I was asked to see her. She had been suffering from some amount of pain in the back and thighs all day, but not more than she had previously done. About 8 P.M. she called the nurse's attention to a swelling between her legs, on seeing which the house-surgeon sent for me. On examination I found that the external genitals on the left side were much swollen, blood having extravasated into both the labia majora and minora on that side. So much was this the case that the left side of the labia majora was much thickened, whilst the lower part of the corresponding labia minora was so much altered that it was evidently about to slough. Between these swollen parts on the left and the corresponding parts on the right was a small, bulging, soft, and fluctuating swelling, evidently caused by blood pressing an imperforate hymen forward. The hymen was thick and tough, but in one spot it had partially ruptured, and a small piece of clot protruded through the small aperture where the rupture had occurred. A careful examination proved that the vagina was much distended. The labia majora and minora on the right side appeared perfectly natural, while no

tumour could be made out above the pubes. The case did not seem to me to warrant any delay in treatment. I had to do with a much-distended vagina, and the hymen was already ruptured. It seemed probable, also, both from palpation of the distended vagina externally, and from the fact that clot had protruded through the ruptured hymen, that the vagina was distended with clot. It seemed, therefore, useless to attempt to empty the vagina with an aspirator, and I therefore determined to adopt a bolder line of treatment. By the help of a probe and my fingers I completely ruptured the hymen and turned out of the vagina just 18 oz. of blood, mostly firm clot. This clot was particularly firm, retaining in great measure a cylindrical form after evacuation; it almost appeared to be undergoing organisation, and was evidently formed from almost pure blood, without admixture of secretion from the uterus and vagina. Behind the clot was a small quantity of thick dark treacly fluid, probably ordinary blood mixed with the vaginal secretions. Passing two fingers as far as possible into the vagina, I found the latter very greatly distended; none of the usual parts could be made out, and no part of the uterus could be reached. I now passed the nozzle of a Higginson syringe along my fingers, and very slowly washed out the vagina with a solution of carbolic acid in water, in the proportion of 1 in 80. I continued the injection carefully until the lotion returned unaltered, taking care that it had a very free escape along my fingers, and that the syringing was very slowly performed. After this an opium pill (a quarter of a grain) was given every six hours.

April 25th.—The patient has passed a quiet night, and there is no pain or tenderness over the abdomen. The vagina contains a considerable amount of yellowish discharge, which has a very offensive smell. I syringed all this away as before.

From this time the patient did well, and made a good recovery, without pain or fever. The yellow offensive discharge continued for some days, but the parts were carefully washed with the carbolic lotion twice a day. The left side of the labia majora recovered its usual appearance; the lower half of the left labia minora sloughed away, but the wound healed without any trouble. The patient was kept in bed for five weeks, but menstruation not appearing, and she being apparently well, she was allowed to get up, and after four more weeks to leave the hospital. Up to the time of her leaving I could never reach the os uteri with my finger, although the parts seemed otherwise normal. Up to July 6th she had not menstruated, but since then I have lost sight of her.

Many cases more or less similar to the above are on record, and there is nothing particularly original in the treatment adopted. In Dr. Galabin's little work on Diseases of Women, p. 41, he says: "When the collection of fluid is comparatively small, a free opening may be made at once. Experience has not yet fully decided whether it is better or not to wash out the cavity immediately. It appears preferable, however, as in the former case, to wait twelve or twenty-four hours for gradual evacuation before injecting, unless any sign of decomposition or febrile symptoms have previously appeared." I have put this case on record as shewing the benefit of immediately washing out the cavity as recommended by Dr. Emmett and others. Even after this was done the vagina, as the report shows, contained a considerable amount of yellowish discharge with a very offensive smell within twelve hours after evacuation; and I attribute much of the success of the case to the care and frequency with which this was washed away. At the same time, I think very much care should be taken, as in this case, to have one's fingers in the vagina as far as the nozzle of the syringe, and to syringe most slowly, taking care that there is a very easy escape from the vagina of the lotion injected.

BRITISH PHARMACEUTICAL CONFERENCE FORMULARY.—A meeting of the committee was held at 17, Bloomsbury-square, on Dec. 8th, at 6 P.M. At 9.30 there was an adjournment until 10 the following morning. Present: Mr. Martindale (in the chair), Messrs. Abraham, Greenish, Groves, Martin, Reynolds, Thresh, and W. Naylor (secretary). Letters regretting inability to attend were received from Messrs. Maben and Symes. Lists of suggested preparations and formulæ were discussed, and agreed to be reported upon.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

OXYGEN IN THERAPEUTICS.

BY CHARLES J. SMITH, M.R.C.S., F.R.G.S., &c.
FORMERLY SURGEON TO THE FARRINGDON DISPENSARY, E.C.

ENGLISH medical literature is singularly deficient in works upon the value of oxygen as an addition to our therapeutic agents—and for this reason, that from one cause or another, but chiefly from the difficulty and cost of production of the gas in any quantity, oxygen has never been brought into general use by the profession in this country, so that no large experience of its advantages has been gained; while, unfortunately, those persons who have written at all upon the subject have done so in such a manner as to have exposed it to the suspicion of quackery. This is greatly to be deplored, because there can be no question that the gas, which Lavoisier characterised as "the vivifying spirit *par excellence*," is an agent of the highest value to the physician.

Those who are desirous of learning what has been done with oxygen must look to the papers read before the various scientific societies on the Continent, and to the records of the practice of many distinguished continental physicians. Demarquay appears to have been a somewhat enthusiastic believer in the efficacy of oxygen inhalation; and he has written strongly upon the subject in his work on "Pneumo-therapeutics." He considers this as one of the safest agents in the treatment of pulmonary phthisis in every stage of the disease, and that its curative action is still more manifest in bronchitis, asthma (spasmodic no doubt is meant), and whooping-cough. Hayem, as well as Demarquay, reports favourably of its use in anæmia and scrofula. Durand-Fardel, Béranger-Feraud, and Thierry-Mieg have utilised its combustible action in the treatment of diabetes, in which disease its use is highly extolled by Dr. E. Morin, who, in his prize essay, read before the Society of Medicine in Antwerp, states: "In inhaling from ten to twenty litres of oxygen every morning the sufferer from diabetes will add to his treatment an incontestably useful agent, especially if his lungs have any tendency to become congested." Dr. Campardon read a paper before the Society of Practical Medicine in Paris. Mayer, Maunoir, Pinard, and Dorean have published among them the details of eight cases, of which the last three were cases of incessant vomiting. Quinquod and Kirnberger have also contributed to the records of success which has attended the administration of oxygen. The most recent, and perhaps the most interesting, use made of this agent was during the late terrible epidemic of cholera at Toulon and Marseilles, when highly favourable results were obtained and are duly recorded in the official reports of the Chief Medical Officer of the Marine. There is every reason to believe that the surgeon too may find a faithful aid in oxygen. Langier appears to have met with considerable success in the treatment of senile gangrene and "local asphyxia congestion" by oxygenated baths. There are many others who have published the results of their experience with oxygen; but those already quoted will be sufficient to show how well worth attention it is as a therapeutic agent.

The two great difficulties which have opposed the use of oxygen on the very threshold have been the cost of its production and its impurity when produced. These difficulties, however, have been successfully overcome by MM. Brin, members of the Société d'Hygiène Français, who have succeeded (after the devotion of fifteen years of their lives to the subject) in perfecting a process by which oxygen is obtained in an absolutely pure state from atmospheric air, and this at a cost which places it as much within reach as the ordinary medicinal agents in daily use. This process of obtaining oxygen is really a most simple one. Although Boussingault stated in a report made to the French Academy of Science thirty years ago that oxide of barium was an unstable agent for the purpose, yet it is this selfsame agent that MM. Brin have succeeded in making their servant. Their anhydrous oxide of barium, placed in retorts heated to a given temperature, and served

with a supply of purified atmospheric air, will give off every two hours oxygen at the rate of one cubic foot per pound of barium oxide. Perhaps the most interesting point in connexion with this process is that it is absolutely a mechanical one. There is no loss or waste of the agent employed—namely, the anhydrous oxide of barium. There is no visible difference under the microscope between the low and the peroxide, and no chemical change takes place. The oxygen is absorbed from the purified air passed through the retorts under pressure; it is given off again under vacuum; and the proof that in carrying out this method MM. Brin call to their aid no complex chemical decomposition is, that the same pound of barium, increased in weight when it takes up the oxygen, returns to its exact original weight when, under vacuum, the oxygen is yielded up. Moreover this same pound of barium is at once ready to perform, and repeat *ad infinitum*, its task of absorbing and yielding up this perfectly pure oxygen.

Park-street, W.

CASE OF MENSTRUATION AFTER REMOVAL OF PREGNANT UTERUS AND APPENDAGES.

By LAWSON TAIT, F.R.C.S.

E. P——, aged thirty-three, menstruates somewhat profusely at irregular times, and has done so twice in the last three weeks. This has continued since I removed the uterus (at the fourth month of pregnancy) in August, 1884. A large soft sarcoma grew from the fundus, and the whole uterus was infiltrated with nodules of the same growth; therefore the clamp was made to include as much of the organ as could be pulled up, and I believe the whole of the organ was removed. Previous to the operation, she tells me that she never had any sexual enjoyment, but that now she has it occasionally. The vagina is now (Nov. 22nd, 1886) greatly elongated, and a small pimple can be felt at the upper end of it, in the cicatrix.

Birmingham.

LARGE HÆMATOMA OF BUTTOCK; ASPIRATION.

By J. HEADLEY NEALE, M.B.ED., M.R.C.P.LOND.,
ASSISTANT-PHYSICIAN TO THE LEICESTER INFIRMARY.

ON the evening of Sept. 3rd, 1885, I was sent for to see Mrs. M——, the wife of a travelling photographer, who was stated to be suffering from persistent loss of sleep, following an injury. I found the patient, a stout comely-looking woman of fifty years of age, bathed in a profuse perspiration, and exhibiting signs of extreme mental as well as physical prostration. She complained of a dull aching pain in the region of the left buttock, which deprived her of any but the merest snatches of sleep, and gave me the following history:—One evening, about three weeks previously, she was leaning against the gate-post at the entrance of the yard in which her husband's photographic "saloon" stood, talking with a neighbour, when a two-horse waggon turned into the gateway. The horses shied, and, instead of making the curve, the waggon came over the corner of the pavement, and my patient was jammed between the near fore-wheel and the gate-post, from which perilous position she was rescued by the prompt action of her friend, who dragged her clear of the wheel. Since the accident she had been under the care of an unqualified practitioner. The application of some "oils" had raised a huge superficial sore—fortunately, however, *not* over the most prominent seat of injury, but doubtless adding in a great measure to the condition of prostration from pain and insomnia in which I found the patient. Careful inquiry elicited the fact that the bladder and rectal functions were normal, so I prescribed a draught containing bromide of potassium and chloral hydrate, promising to make a more systematic examination of the swelling on the following day.

This I did, and, on the principle of exclusion, made up my mind that I had to deal with one of three things—(*a*) malignant tumour,[1] (*b*) gluteal abscess, or (*c*) hæmatoma (unabsorbed). The size and period of growth negatived the first, in addition to which I thought I could detect obscure fluctuation. A subnormal temperature contra-indicated the second alternative, so I made the diagnosis that there had been fracture of the gluteal muscles with deep-seated hæmorrhage. An exploratory puncture with a fine trocar and cannula, placed the matter beyond a doubt, several drops of serous fluid with flakes of fibrin oozing through the cannula. On Sept. 7th, after cleansing the parts with a 1 in 2000 solution of corrosive sublimate (the discharge from the sore referred to smelling badly), I plunged a hollow needle attached to a Potain's aspirator into the most dependent part of the swelling, and drew off a quantity of blood-stained serum (17¾ oz., carefully measured) with flakes of fibrin in suspension. There was so little apparent diminution in the size of the tumour, that I felt convinced that all the fluid had not been evacuated, and reluctantly withdrew the needle, only to find it, as I had anticipated, plugged with fibrin. The patient expressed herself as much relieved, but in the course of a few days, the dull aching pain having returned, I aspirated a second time, using on this occasion a good-sized trocar and cannula, and removing 14½ oz. of fluid. Rapid resolution followed, and then the condition of the injured parts was plainly shown. Running downwards and inwards from the back of the great trochanter was a nodulated ridge, the contracted tendinous fibres of the gluteus maximus, which had been torn through close to its insertion, while the belly of the muscle hung as a flabby useless mass, giving an asymmetrical appearance to the buttocks. The patient made a rapid and complete recovery, with the exception that on flexing the trunk beyond a certain angle (as on stooping to pick up anything from the floor) she was unable to regain the erect posture without the aid of extraneous objects, such as a chair or table leg; and failing these she adopted much the same tactics seen in children suffering from pseudo-hypertrophic paralysis, by climbing up her own thighs.

I saw Mrs. M—— in July last, ten months after the accident, and found her in good health, but complaining that "the place ached a good deal in wet weather." Her daughter informed me that they sometimes had to help her up when she stooped, and if more fatigued than usual she could not get upstairs to bed without assistance. The patient allowed me to inspect the parts, and I found that the asymmetry persisted in a marked degree, a deep furrow indicating the line of fracture of the muscle.

Leicester.

[1] I have twice seen a sarcoma result from a hæmatoma following an injury, and have long regarded this as one of the "ultimate destinies" of blood-clot.

A CASE ILLUSTRATING THE NEED OF CAUTION IN THE USE OF SALICYLIC ACID.

By W. T. FREEMAN, L.R.C.P. Lond., M.R.C.S.,

IN connexion with the annotation in THE LANCET of Oct. 2nd on salicylic acid ("salicylated beer") the following notes should prove interesting.

A short time ago I was attending an old lady of fifty-nine years of age. My attendance to the time of her death extended over a period of three weeks, but she had been attended for a few weeks previously elsewhere by another medical man. Her symptoms ran as follows: A great feeling of malaise, of depression of spirits, with always more or less of a slight headache; tongue coated with brownish fur, especially at the back; sallow skin; stools clay-coloured; bowels opened freely every day; pulse during the whole of the three weeks full, and beating at the rate of from 105 to 110 per minute; never any rise of temperature; specific gravity of urine about 1020, acid, with distinct trace of phosphates, but no albumen or sugar. She was restless at times at night, even to the extent of getting out of bed aimlessly. I diagnosed the case as an obscure one, but expressed my opinion that she was suffering from congestion of the liver, and probably also from some congestion of the brain. The patient was generally of a feeble habit. On the twentieth day of my attendance, although she showed no alarming symptoms whatever, and as she became but slowly better, I suggested a consultation. She had improved, however, in these respects—the motions had become of an almost natural colour, and the headache was better; the rest of the symptoms were unchanged. The treatment to that day had been attending to the bowels, regulating diet, and keeping the patient quiet, whilst medicinally she had been taking a simple effervescing

mixture of tartaric acid and bicarbonate of potash, with ten grains of bromide of potash in each dose, three or four times in the twenty-four hours. After most carefully considering the case, the gentleman I had called in came to the conclusion that a rheumatic taint was at the bottom of the remaining mischief, and prescribed for her fifteen grains of salicylic acid, together with small doses of carbonate of soda, carbonate of ammonia, and tincture of nux vomica three times daily. In this treatment I coincided. She was quite in a natural mood in the afternoon that we saw her together, and we were agreed that there was no cause for alarm, and that there was reasonable hope of her being restored to her usual state of health in the course of a few weeks. I saw her no more till next morning; she had then taken three doses of the salicylic acid mixture. I found her comatose and rapidly sinking. The urine contained albumen. We had another consultation as soon as possible, but she died in the course of a few hours. Although probably the brain symptoms were more severe all along than I expected, and most likely the head mischief would have ended her days, yet I cannot help feeling that our last attempts to cure our patient only resulted in the abrupt snapping of the thin cord of life she had left to her.

Pangbourne.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

POISONING BY CYANIDE OF POTASSIUM; RECOVERY; REMARKS.

(Under the care of Dr. ORD.)

THE following case is one presenting some points of great interest: the large amount of the poison taken, the severity of the effect produced, and the recovery from this condition, considering the duration of time which had elapsed between the taking of the dose and the commencement of treatment. Cyanide of potassium produces symptoms similar to those which follow the administration of prussic acid, and produces its poisonous effect with nearly the same rapidity. For the notes of the case we are indebted to Mr. A. A. Brockatt, late house-physician.

Sophia P——, aged thirty, was admitted at 4 P.M. on Oct. 4th, having taken cyanide of potassium with an intent to commit suicide about fifteen minutes previously. She appears to have been living a very unhappy domestic life, and took a piece of the salt, "the size of an ordinary lump of sugar," and chewed it, swallowing the greater amount, a stock being kept in the house for business purposes. In a few seconds she became very giddy, and her head swam; but she remembered nothing more until she found herself in bed at the hospital. According to a statement made, she fell suddenly on her face without uttering a sound; the assistance of the police was then procured and she was brought direct to St. Thomas's. One of the policemen removed several pieces of the salt from between her lips while in the house.

When seen at the hospital, about ten minutes later, she was completely insensible, and, except for an occasional gasping inspiration, was in a state of apnœa. Her face was flushed and of a livid hue, the limbs flaccid and cold, the pupils dilated, and the eyelids closed; the pulse was imperceptible at the wrist, and the jaws were tightly clenched. She had passed urine unconsciously, but not fæces. An odour of bitter almonds pervaded the whole room. The patient was supposed to be dead when brought into the hospital.

Artificial respiration was at once resorted to, with cold affusions and flagellation of the chest with a wet towel. The mouth having with great difficulty been opened with a screw gag, the contents of the stomach, which had the same characteristic smell, were pumped out, and about fifteen ounces of a solution of ferrous sulphate (twenty grains to the ounce) injected. The stomach was not full. While this was being done the breathing entirely ceased, and artificial respiration had to be hurriedly resumed. An injection of forty minims of ether was administered, and her condition gradually improved, but artificial respiration had to be kept up more or less continuously for one hour, and for shorter intervals during another, as her breathing stopped whenever it was left off. Even at the end of this time the respiratory acts were extremely shallow and irregular, but they improved markedly after another ether injection. Previously to this a quantity of solution of carbonate of potash had been poured down her throat.

The patient gradually began to recover consciousness in about two hours after admission, but appeared to be in a very dazed condition, was extremely sleepy, and could give no account of herself. She recovered, however, during the evening, and complained of nothing but extreme drowsiness and an uneasy sensation of heat behind the sternum and in the epigastrium. Before recovering consciousness she was very sick, and continued so at intervals for a few hours; the first vomit gave a decided prussian blue tinge with sulphuric acid, and was of a dirty-green colour. Her breath smelt faintly of bitter almonds during the next day, and she slept almost continuously, but she had no further symptoms, and left the hospital in four days quite well. She admitted having been drinking during the day, but was not intoxicated.

Remarks by Mr. BROCKATT.—The above is one of the few recorded cases of recovery from poisoning by cyanide of potassium. The dose in this case was a very large one. Several cases have been recorded which have proved fatal after five grains, but it was here estimated that she must have had at least forty grains. The great symptom was the persisting interference with respiration, and I have no doubt that perseverance with artificial respiration, combined with the subcutaneous injection of ether, was the great factor in saving the patient's life. It seems unlikely that antidotes could have had much influence in the happy result attained, as fifteen minutes had elapsed before they were administered.

LINCOLN COUNTY HOSPITAL.

THREE CASES OF OVARIAN TUMOUR; OVARIOTOMY; RECOVERY; REMARKS.

(Under the care of Mr. T. M. WILKINSON.)

FOR the following notes we are indebted to Mr. M. Johnston, house-surgeon.

CASE 1. *Multilocular Cystic Disease of the Left Ovary; Small Cyst of Right Ovary.*—E. K——, aged fifty-four, was admitted on Feb. 15th, 1886, having been sent by Dr. Lett of Redbourne. Married; has had five children, one (the last aged twenty-one) still living; the others died of consumption. Had always been healthy. She first noticed pain with swelling in the left iliac region about eight months ago, which had increased rapidly in size since that time. Menstruation had ceased for about twelve months, with one exception about midway during that interval, when it lasted seven days, and whilst in the hospital a discharge came on lasting three days. Her appearance is healthy although thin and emaciated. Heart and lungs normal. Abdomen distended by a tumour, which is dull on percussion for three inches above the umbilicus, resonant in left flank, but dull in the right; the tumour appears movable, and composed chiefly of solid matter. There is a great deal of fluid in the peritoneal cavity superficial to the tumour. Abdomen measures 42 in. around the umbilicus. Uterus high up, normal, and free from tumour.

Ovariotomy was performed on March 9th. Chloroform was first administered, but, causing asphyxia, the A.C.E. mixture was given, and answered well. On opening the abdomen there was a rush of peritoneal fluid. The tumour was a multilocular cyst, with a large amount of solid and semi-solid gelatinous material, which weighed 7¼ lb.; the amount of fluid, cystic and peritoneal, was five gallons. There were some slight adhesions to the omentum. The original incision had to be considerably enlarged to admit of the removal of the tumour. The pedicle was tied with silk, cut short, and returned. On examining the right ovary, it was found diseased, a single cyst, about the size of a small orange, being removed with the ovary. The abdominal cavity was sponged out, and the edges brought together with deep carbolised gut and superficial silk sutures, a glass drainage-tube being left at the lower part of the wound. The dressing was dry

antiseptic gauze. While being lifted into bed the patient became collapsed; the drainage-tube was found to be filled with blood. This was removed from the tube, and as there was no recurrence the cavity was not opened again. Serum tinged with blood continued to pass through the tube for some days. When the tube was removed the wound kept open by it healed in a few days. The bleeding was caused by the tube being caught in the bandage and wounding some intestine.

This patient progressed slowly but steadily, her highest temperature being 101·6°. She was ultimately discharged cured.

CASE 2. *Multilocular Cystic Disease of Left Ovary*—G. D——, aged twenty-four, a domestic servant, was admitted on April 12th, 1886. The patient is thin and short. Her family history is good; she has always been healthy, and is unmarried. The abdomen has been increasing in size for twelve months, but this was not noticed by the patient until attention was drawn to it by others. For the last three or four months she has had pain in the right iliac fossa. Menstruation regular. A distinct tumour can be felt; dull on percussion. There is resonance in the right and left flanks, and two inches above the umbilicus. Fluctuation all over the tumour. The uterus is depressed, but movable from the tumour.

April 21st.—The A.C.E. mixture having been administered, a small incision was made in the abdominal wall for two inches and a half, and the cyst exposed and tapped. It was then found to be multilocular, and to have a solid-feeling growth, consisting of smaller cysts containing gelatinous matter, situated in the upper part of the tumour, and to the right side, this was about the size of a fœtal head. The pedicle was broad and thin; it was ligatured with China silk and returned. There was fluid in the cavity—not cystic,—which was sponged out; the wound was closed with silk sutures and dressed with iodoform. The fluid from the tumour measured 1 gal. 6 pts. The wound healed by first intention, the stitches being removed on the third day.

The temperature in this case rose to 102° shortly after operation, ever after being below 101°. The patient made a most satisfactory recovery, and was discharged from the hospital cured.

CASE 3. *Cystic Disease of Left Ovary; Dermoid Cyst.*—B. S——, aged thirty-two, was admitted on May 10th, 1886, having been sent by Dr. Lett. Married; no children. Menstruation regular. Has always been healthy until a year ago, when she began to lose flesh. Two months after this she noticed a swelling in the left iliac region, but as there was no pain she took very little notice of it. For the last three months it has been increasing rapidly, and causing pain in her left groin and loin. The abdomen measures 34½ in. at the umbilicus, and is occupied by a swelling partly solid and partly fluid—the solid portions being in the right hypochondriac and left lumbar regions. The percussion-note is dull all over the abdomen, except in the flanks and above a line drawn transversely two inches above the umbilicus. Uterus normal and freely movable.

On May 25th an operation was performed. The A.C.E. mixture having been administered, an incision three inches long was made, and the fluid withdrawn from a large cyst occupying the front of the tumour, which was still too large to be removed through the opening, so the incision was continued another inch. With some difficulty the tumour was removed, when it was found to be a dermoid cyst containing a large quantity of vernix caseosa—hair—bone, and partially developed teeth. The weight of the solid portion was 5 lb. 2 oz., the fluid being small in quantity. The pedicle was ligatured and returned, the cavity being thoroughly sponged out. The wound was closed with silk sutures, and dressed with iodoform and dry lint. A few adhesions to the parietal peritoneum were broken through, and others attached to the intestines were divided between double catgut ligatures.

The highest temperature after operation in this case was 100°. The patient convalesced satisfactorily, and was discharged cured.

Remarks.—Before operation the patients were carefully dieted, and in addition had baths containing carbolic acid. The operations were done in the small general ward in which the patient was to remain, the ward having been previously thoroughly disinfected. The temperature of the room during the operation was 70°, being afterwards kept at 65°. For a quarter of an hour before and during the operation the carbolic spray was at work, but not close to the patient. The hands of the operator and assistants were washed in carbolic solution, and the usual precautions with regard to sponges and instruments were taken. After the operation the patient was put to bed, and carefully nursed, watched, and fed either by mouth or rectum according to circumstances. It is not necessary to enter into the details of their convalescence; suffice it to say that they all responded well to the efficient nursing provided for them.

HULL ROYAL INFIRMARY.

SCALD OF THE LARYNX IN A CHILD; TRACHEOTOMY; RECOVERY.

(Under the care of Dr. LUNN.)

FOR the following account we are indebted to Mr. Edward Harrison, house-surgeon.

Charles C——, aged two years and four months, was admitted on Jan. 2nd, 1886, at 6.30 P.M. At 2.30 P.M. on the day of admission he attempted to drink from the spout of a kettle containing boiling water.

On admission there was some cyanosis and sucking in of the lower ribs during inspiration. He was at once put into a tracheotomy cot, with a steam kettle, in a warm room. At 8 P.M. the symptoms were much relieved. At 9 P.M. he became much worse; there was much cyanosis and sucking in of the chest walls during inspiration, and the breathing was stridulous. Tracheotomy was performed, and at once relieved him.

On the following morning the temperature was 103·4° F. This came down gradually day by day. For the first few days there was much bronchial discharge, so that the tube had to be cleared with a feather about every five minutes. His pulse was 150, and respiration 60 to 80. He was treated with brandy, ipecacuanha wine, and aromatic spirits of ammonia, and had poultices applied to the chest. On the 19th the silver Bryant's tube was changed for an indiarubber one, in which a hole was cut to allow of respiration through the larynx. On the 22nd he wore a cork in the tube all day, and on the 23rd the tube was removed and the wound allowed to heal. The after-progress was uninterruptedly good. He was discharged on Feb. 5th, well.

INTESTINAL OBSTRUCTION CURED BY INVERSION AND INJECTION OF AIR.

(Under the care of Mr. CRAVEN.)

Frederick F——, aged four, was admitted on Jan. 24th. The child was well and the bowels acted regularly daily until Jan. 15th, when they did not act. Vomiting began the same evening and continued until the day of admission, when it had become very offensive. No blood or mucus was passed. The child complained of abdominal pain, and refused to take any food.

On admission the face was flushed and looked pinched, and he was much emaciated. Abdomen distended; pain referred to umbilicus. Tongue red and dry; pulse small and frequent. He vomited once, but the vomit could not be collected; it smelt, however, stercoraceous. Under chloroform the abdomen was found to be distended and tympanitic all over; no sausage-shaped tumour to be felt. Per rectum a few scybala were removed from its lower part, and a mass was then felt which seemed to be scybala covered with mucous membrane. The child was then inverted and air pumped into the bowel; this could be felt entering by the hand placed on the abdomen. After a short time the air seemed to enter more easily, judging by the force required to squeeze the syringe. The inflation was then discontinued and the finger again introduced into the rectum, where the fold of mucous membrane had disappeared, and some free scybala were found and removed. The finger could now be passed above the brim of the pelvis, where more scybala were lodged. An enema of a pint of warm water was then injected, which brought away some hard lumps, but no blood or mucus. The abdomen was rubbed with an oiled hand, which assisted in expelling the water and a small formed motion. Three minims of tincture of belladonna and three of tincture of opium were given in a teaspoonful of water, but were immediately vomited; the vomit was stercoraceous. A twelfth of a grain of morphia and of belladonna was introduced as a suppository, and the child passed a good night.

Jan 25th.—The mixture of opium and belladonna was

ordered three times a day; a teaspoonful of milk every half hour, Brand's essence, and brandy.

26th.—Vomited after drinking a quantity of milk in the absence of the nurse.

28th.—Bowels acted twice. Is able to take more food, and is gaining flesh.

Feb. 2nd.—Bowels acted freely. Is able to take chicken and egg, &c.

7th.—Bowels have acted daily since the 2nd. Has no pain; abdomen soft and natural. Has gained three pounds in weight since Feb. 1st.

14th.—The child was discharged well.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

The State of the Femoral Artery after Ligature for Popliteal Aneurysm.—Richter's Hernia or Partial Enterocele.

AN ordinary meeting of this Society was held on Tuesday last, Mr. G. D. Pollock, F.R.C.S., President, in the chair.

Mr. W. S. SAVORY contributed a paper on the effect upon the Femoral Artery of its Ligature for the cure of Popliteal Aneurysm. The paper contained an analysis of twenty-six specimens in the museums of the London hospitals in which the femoral artery had been tied in Scarpa's triangle for the cure of popliteal aneurysm. Of these specimens seventeen were complete. Of these seventeen, the artery was pervious throughout in thirteen, and partially closed in four. In none was the artery impervious throughout. Of the seventeen specimens fifteen were cured. In these the artery was pervious in eleven and partially closed in four. In two the operation had failed to cure, and the artery remained pervious in both. Mr. Savory gave details of cases from his own practice. In one case, a man aged thirty-seven, a hawker, with popliteal aneurysm, the pulsation of which could be reduced by controlling the femoral, there was a three months' history. In February the femoral artery was tied in Scarpa's triangle. A slight return of pulsation occurred on the third day. One year afterwards the aneurysm had returned, with slight pulsation, and formed a bigger tumour. It was treated by rest and elastic bandages without much effect, for six months later it was in the same state. Then the patient was anæsthetised, and the leg bandaged with Esmarch's apparatus; the popliteal artery was tied in the upper part of the popliteal space. This operation was perfectly successful. In a second case the artery was ligatured first in Scarpa's space, next in Hunter's canal, and finally a third time in the upper part of the popliteal space. The question of reconsidering the method of ligaturing the popliteal artery for popliteal aneurysm ought to be entertained. Mr. Savory was disposed to think that this method would prove most useful, and said he should generally prefer to adopt it in future.—Mr. G. D. POLLOCK said that in his experience ligature of the external iliac artery was very successful in obliterating the vessel below.—Mr. JOHN CROFT concluded from the evidence in Mr. Savory's paper that ligature of an artery in its continuity should be practised by the application of two ligatures, with division of the vessel between. An additional element of safety was added when the two ligatures were used.—Mr. J. W. HULKE thought that Mr. Croft's remarks were beside the subject of the paper. The author's paper appeared to him to point to the conclusion that the best method of treating popliteal aneurysm was by tying the artery close to the aneurysm. Doubtless in past times such operations were frequently fatal from secondary hæmorrhage and other accidents, but then it was likely that the ligatures were not thoroughly aseptic.—Mr. JOHN WOOD said that the outcome of Mr. Savory's valuable paper was a return to the practice of Anel, who ligatured the artery just above the aneurysm. But since Anel's time a complete revolution had taken place in the treatment of surgical wounds. The employment of the method of double ligature, with division between, prevented tension of the parts around the artery, and strict antiseptics also prevented inflammation; hence the chief dangers of the original Anel's operation were removed. The artery should be tied before the aneurysm attained an enormous size, lest secondary hæmorrhage and gangrene might result from the great tension. The remarks of Mr. Croft were not so irrelevant to the paper as Mr. Hulke seemed to think.—Mr. THOMAS SMITH considered that ligature of the popliteal instead of the femoral artery was preferable for popliteal aneurysm; the operation was not difficult with the modern means at our disposal, and by the use of Esmarch's bloodless method. It was much more likely to produce a radical cure. He had ligatured this vessel in two or three other cases. In one he had previously ligatured the femoral. He was very glad that Mr. Savory had come to practise the method of double ligature with division between. The fact that the artery was pervious beyond the ligature was stated in recent books, and especially in Messrs. Ballance and Edmunds' pamphlet.—Mr. A. A. BOWLBY said that Mr. T. Smith had also tied the popliteal artery as a primary operation in one case of popliteal aneurysm. The artery was tied in the upper part of the popliteal space; the return of pulsation in the tibial arteries occurred rather sooner than when the femoral was tied; the aneurysm was cured perfectly. He alluded to one pathological point as to the condition of the artery just above the aneurysm; it was likely to be fully as healthy as the artery in Scarpa's triangle.—Mr. C. BALLANCE said that in his numerous experiments on the ligature of large arteries in their continuity in animals he had never found the artery obliterated for any distance beyond the ligature.—Mr. W. S. SAVORY, in reply to Mr. Smith, said that his paper dealt with the femoral artery, whereas Mr. Ballance's experiments were concerned with other arteries. The variability of the result would depend largely on the artery tied. He was not aware that any ordinary book stated that the artery was pervious from the ligature to the aneurysm. In reply to Mr. Pollock, he was not prepared to state the proportion of figures in which the femoral was pervious or impervious after ligature of the iliac artery. He agreed with Mr. Hulke that his paper was in no way concerned with the employment of two ligatures instead of one. The evidence on that point was in favour of one ligature, and of silk or twine over any form of animal membrane. It was true that in one case he had recently ventured to depart from his usual practice, but if he had to tie the femoral artery to-morrow he should use but one, and that a silk or twine ligature. He thought that the introduction of antiseptics and of the double ligature into a discussion on his paper was irrelevant.

Mr. FREDERICK TREVES read a paper on Richter's Hernia or Partial Enterocele. In this form of hernia a part only of the circumference of the bowel is engaged in the hernial orifice and there strangulated. The strangulation may be complete, and may proceed to gangrene without the lumen of the bowel being entirely occluded. The nomenclature of this rupture is obscure. By the majority of English writers it receives the title of Littré's hernia. The hernia described by Littré in 1700 was not of the character now under notice, but was an example of the escape into a hernial sac of a Meckel's diverticulum. These two varieties should be kept quite distinct. The author traces the history of these forms of rupture as displayed in surgical literature. The name of Richter's hernia is proposed, since the first scientific recognition of the condition was due to that surgeon. In Richter's hernia the small intestine is involved, and is held by that part of the gut that is most remote from the mesentery. The condition is met with more frequently in women than in men, and in femoral than in inguinal ruptures, is limited to adults, and occurs in recent as well as in old-standing protrusions. The mode of formation of the hernia was discussed, and the question of the formation of diverticula considered. The author described four cases that occurred in his own practice. The account of the clinical and pathological aspects of the condition was based upon the examination of thirty-three recorded cases. The symptoms tend to assume a milder character than is observed in the usual form of strangulation. The vomiting is slighter, less frequent, often of late onset, and is very rarely feculent. Hiccough is uncommon. The bowels may remain open during the whole progress of the strangulation, or may act occasionally, or will respond to aperients. In certain instances persistent diarrhœa may exist. Tympanitic distension of the abdomen is uncommon. The hernial tumour is very small, and often not recognised. The gut is practically irreducible by taxis, and, if prolonged efforts are employed, reduction *en masse* not unfrequently occurs. The mortality is exceedingly high, being represented by 62·2 per cent. This depends upon the difficulties in the way of diagnosis, upon the irreducibility of the gut, and upon the remarkable frequency of gangrene. The mortality after

herniotomy is proportionately high. The special features in the treatment are considered. The hernia deserves notice on account of the peculiar features involved in its pathology, its special clinical aspect, its grave prognosis, and the light that it throws upon the production of strangulation symptoms in general.—Mr. J. W. HULKE said that Littré described in 1700 hernia of a Meckel's diverticulum, but a second form of partial hernia was described in 1714 by Littré also, in which it was distinctly stated that the enterocele was not a loop of colon, and that not the whole of the circumference of the bowel was included. He rather thought that Richter did not fully comprehend the matter. In his second volume, published in 1779, references were made to small herniæ in which the whole circumference of the bowel was not included as existing between the xiphoid cartilage and umbilicus, which were sometimes omental and sometimes intestinal. Richter spoke of but one case, and of that he gave no description; probably, therefore, he neither operated on it nor dissected it. Reike described congenital and acquired diverticula; the latter were also known as partial enterocele. Ruysch treated of hernia lateralis, which was doubtless the same condition. Dieffenbach had a separate chapter on this affection, and had had two cases in his own practice. This form of hernia could hardly be called very rare. It was exceedingly difficult to distinguish it from an ordinary hernia, and he doubted if we could depend on the symptoms in a differential diagnosis.—Mr. TREVES, in reply, agreed with Mr. Hulke that a great deal of confusion had existed on the subject of the original description of the hernia; but he also thought that if Mr. Hulke had heard certain parts relating to this question, and which had been suppressed in the reading of the paper owing to the great length of the communication, he would have concurred with him (Mr. Treves) in assigning the first accurate description of the hernia to Richter.

CLINICAL SOCIETY OF LONDON.

Diphtheritic Paralysis and Heart Disease.—Acute Myositis.—Gastric Ulcer.

AN ordinary meeting of this Society was held on the 10th inst. Mr. Thomas Bryant, F.R.C.S., President, in the chair. Dr. Montagu Murray and Mr. Frederick Treves were elected auditors for the annual general meeting.

Dr. HERRINGHAM read a paper on two cases of Diphtheritic Paralysis with Heart Affections and Clonic Movements. On admission there was in both great weakness of the legs, with a tottering gait, and the deep reflexes were abolished. The legs were in other respects normal. In one case, a girl aged nine, eight or nine weeks from the beginning of the weakness the knee-jerk was suddenly present in excess, and with it ankle-clonus. The jerk became normal in four weeks; the clonus vanished in six weeks. The heart, which was normal on admission, became affected during her stay in bed with mitral disease, and so remained after an interval of ten months. The other case, a boy aged four, did not ever show ankle-clonus or extensive jerk, but a few days after his discharge he returned with a faint mitral murmur. If, as is now supposed, diptheritic paralysis is due to disease of the central grey matter of the cord, this case is in favour of the theory that the deep reflexes depend upon this part, and are increased in disease not because the brain's veto cannot travel down the cord, but because the grey matter is itself altered. — Dr. S. COUPLAND considered that if the murmur and cardiac enlargement occurred during the diphtheritic attack, myocarditis might have been the cause. Diphtheritic paralysis was more likely to supervene if cases were not treated from the first as Dr. Abercrombie had pointed out. Loss of the knee-jerks was a constant symptom of the paralysis. He had seen cases which were ataxic rather than paralytic.—Dr. ANGEL MONEY had made some observations on the mode of disappearance of the knee-jerk in diphtheritic paralysis. The jerk became excessive—an illustration of the "irritable weakness" of old authors—prior to its being lost. He thought this would throw some light on the occurrence of phenomena of exaggeration preceding the proper re-establishment of the jerk when the paralysis had passed away. In some cases the tap on one ligamentum patellæ was followed by excessive contraction of the triceps on that side and by a well-marked contraction of the triceps of the other side, showing that the nerve discharge in the cord had passed across from one anterior horn to the other.—Dr. MACLAGAN thought diphtheritic paralysis was anæmic in origin in many cases. Ataxic paralysis occurring after diphtheria disappeared under tonic treatment, as in the case of a gentleman, aged eighty-two, that had been under his care. Diphtheria affected the myocardium, and so might generate a murmur, as chorea did by causing irregular spasm. He asked whether there had been albuminuria in the cases.—Dr. PERCY KIDD objected to the view that diphtheritic paralysis was of anæmic origin. In many fatal cases there were changes in the anterior spinal cornua, as Déjérine, Landouzy, and himself had shown. Neuritis of peripheral nerves and changes in the anterior and posterior roots of nerves had been observed in cases of diphtheritic paralysis.—Dr. T. BARLOW could not allow that the paralysis was of anæmic, functional origin. In other ordinary cases of anæmia such symptoms as nasal voice, failure of accommodation, and paralysis of oculo-motor nerve were not observed, and such a combination would suggest diphtheritic paralysis, not anæmia. He could confirm Dr. Money's observation to the effect that there was a period of irritability preceding the loss of the knee-jerk. He considered that dilatation of the myocardium would explain the murmurs observed in diphtheria.—Dr. S. WEST also agreed that affection of the muscular substance of the heart would best explain the murmurs, were it not that they had lasted ten months; on the other hand, the fact that the murmurs vary so much was in favour of their myocardial origin.—Dr. HERRINGHAM, in reply, said that the enlargement of the heart persisting so long, and the existence of an accentuated second sound, seemed to him to point to the valvular origin of the heart disease.

Mr. TREVES read a paper on Acute Myositis. A carman, aged twenty-two, was admitted into the London Hospital with "an inflamed arm." Three weeks previously he was exposed to severe cold when driving, and had been wet through. The chief symptoms were rigor, malaise, fever, loss of power in the arm, and cramp-like pain. Similar pains appeared in the calves of both legs. The affected parts were swollen and tender. The trouble in the legs soon subsided, but the swelling in the left arm increased. The muscles, notably the deltoid and biceps, were enlarged, and were very hard and tender. There was fever. Under treatment, extending over three weeks, the induration in the muscles gradually disappeared without suppuration, and the man made a complete recovery. Mr. Treves considered the case to be one of acute myositis, and entered fully into the points raised by the differential diagnosis. He divided acute myositis into the following varieties: 1. Simple myositis due to injury or the direct extension of inflammation. 2. Myositis from cold. 3. Infective myositis. This interesting affection has been fully described by Connor, Hayem, and Scriba. The usual centre of infection is a common boil, and the similarity of the disease to acute osteo-myelitis may be considered to have been demonstrated. 4. The myositis of trichinosis. The present patient was in the habit of eating a quantity of ill-cooked pork, and Mr. Treves discussed the phenomena of cases of mild trichinosis that undergo spontaneous cure. 5. Secondary myositis—i.e., that attending certain eruptive fevers,—the myositis of syphilis, and the muscle inflammations of pyæmia, puerperal fever, scurvy, glanders, and ulcerative endocarditis. The general phenomena of true muscle inflammation were considered, together with the usual seats of that inflammation and the clinical evidences of the disease. — Dr. DE HAVILLAND HALL said that acute glossitis had been clearly traced to "cold."—Mr. R. J. GODLEE said that in a case of myositis ossificans occurring in a child the disease began as a tender swelling in the muscle, and it was supposed that a tumour was developing.—Dr. EWART asked whether the cases described were true myositis or perimyositis. In rheumatic conditions like lumbago the fibrous sheath was probably affected. He thought that a distinction of a pathological kind into parenchymatous and interstitial inflammations would improve the classification.—Dr. GOODHART spoke of two cases, both of middle-aged men with a suspicion of gout, in whom severe pain in one calf of the leg was the preface to a hard indurated condition of the muscle, which lasted from two to three weeks, and in one of them possibly suppuration occurred.—Dr. COUPLAND mentioned a case of embolism in a middle-aged man suffering from chronic Bright's disease. There was sudden pain in the right elbow, followed by sudden swelling, which

rapidly increased, and suggested hæmorrhage. The artery was tied, but the necropsy showed that there was no rupture of the artery. There had formed an embolic aneurysm of a branch of the brachial artery. Would Dr. Ewart include in the term myositis the remarkable degeneration in muscle that occurred in typhoid and other fevers?—Dr. S. PHILLIPS referred to a case with contracted elbows and tender muscles, apparently due to a past gonorrhœa. In another case a young man was seized with intense pain and tenderness in both calves, suggesting deep phlebitis; but the signs disappeared; the patient had gonorrhœa.—Dr. S. WEST spoke of the case of a young man with an obscure acute affection of muscles. It did not appear to be simple rheumatic fever, for the muscles of the arms, calves, and thighs were tense, hard, and extremely tender. There was high fever and rapid wasting of the muscles. Albuminuria and œdema were also present. Trichinosis was thought of, but the case must remain undiagnosed.—Mr. FRED. TREVES specially avoided speaking of glossitis. He could not grasp the idea of glossitis from cold. Erb had published an account of the anatomical changes in myositis, and had shown that the true muscular tissue was involved. Did muscular rheumatism set in with a rigor and high continued fever lasting two or three weeks? Did such symptoms occur in gonorrhœal rheumatism?

Dr. MONTAGU MURRAY read a paper on a case of Gastric Ulcer with unusual complications. An anæmic girl, aged twenty-three, was admitted on Feb. 15th with indefinite gastric symptoms. On the 16th the temperature rose suddenly to 103·6°F., a sharp pain was experienced in the left side, and a pleuritic rub could be heard. On the 17th the abdomen was found to be tender and swollen. During the 17th and 18th there was severe vomiting. Hæmatemesis began on the 19th. At first the blood was bright red, and the amount ten ounces, but subsequently the quantities were smaller and the colour much darker. Patient rapidly became weaker, and died on the 22nd. Vomiting ceased four hours before death. At the post-mortem acute left pleurisy and acute peritonitis were found. On opening the stomach a small ulcer was seen at the cardiac end; its outline was roughly circular, its diameter an inch, its wall thickened and precipitous, and its floor composed of peritoneum, perforated in the centre by an aperture one eighth of an inch in diameter. Three questions were discussed: (1) The age of the ulcer; (2) the time of the perforation; (3) the connexion between the ulcer and the inflammation of the serous membranes. 1. It was argued that while the symptoms on admission did not clearly point to ulceration, yet when considered with the subsequent history and the post-mortem appearances, it was clear that the ulcer must have been present at that time. The immediate cause of the hæmatemesis was probably the straining during the severe vomiting which preceded it. 2. That perforation was a cause of the pleurisy and the peritonitis was rejected on the ground that the hæmatemesis did not begin until after the onset of the three complications; that the vomiting did not cease until four hours before death; and that there was no evidence of extravasation from, or of inflammation in the neighbourhood of, the perforation, which was believed to have coincided with the cessation of vomiting. 3. The connexion of the ulcer with the pleurisy, and peritonitis was rendered probable because of the existence of communicating lymphatics; the occurrence of left pleurisy with an ulcer at the cardiac end; the rarity of the two conditions occurring simultaneously; and the absence of any other discoverable cause.—Dr. MITCHELL BRUCE said that cases of perforation and peritonitis were of great interest, not only to the physician, but also the surgeon. In Dr. Murray's case it seemed clear that peritonitis preceded perforation.

The following card specimens were shown:—Dr. A. H. Robinson: Venous Angioma of Leg. Mr. Pearce Gould: Branchial Fistula of Pinna of Left Ear. Dr. Herringham: Mitral Disease after Diphtheria. Mr. Harrison Cripps: Valvular Left Lumbar Colotomy.

MEDICAL SOCIETY OF LONDON.

Treatment of Lateral Curvature of the Spine.—A New Method of Excision of the Knee.

AN ordinary meeting was held on the 6th inst., Mr. R. Brudenell Carter, F.R.C.S., President, in the chair.

Mr. WM. ADAMS read a paper on the Advantages of Gymnastic Exercises in the Horizontal Position in the Treatment of Lateral Curvature of the Spine. The author recommended a combination of the various methods, or so-called systems, of treatment—such as recumbency, muscular exercises or gymnastics, and mechanical support,—rather than relying upon any one system exclusively. The degree in which they should be combined must vary according to the nature of the case, age, and other circumstances. For gymnastic exercises in the horizontal position Mr. Adams had recently employed an improved exercising plane, made by Mr. Ernst at Mr. Adams's suggestion, and exhibited to the Society. The plane is 6 ft. in length, and made on the incline, having a sliding board, half the length fitted with rollers, and movable up and down the inclined plane in metal grooves at the sides. The exercise essentially consists in the patient drawing herself up the inclined plane whilst the body is resting on the sliding board or movable stage. This movement may be repeated several times—say from five to ten at the commencement—after short intervals of rest, and gradually increased, but always avoiding fatigue. Exercises on the plane and the trapeze bar may be repeated two or three times a day, and lasting half an hour each time, constituting a plan of home gymnastics. Mr. John Shaw was the earliest advocate of horizontal gymnastics, and illustrated an exercising plane plate in his work in 1823. This was modified by Mr. Ainsbury, but the plane exhibited embodied the principle of Mr. Shaw's plane with several useful appliances for special exercises. By the combination of recumbency with gymnastic exercises, and the addition of mechanical support in some form best adapted to the requirements of each case, the spinal curvature, when slight, would be removed, and in the later stages its progress would be arrested.—Mr. EDMUND OWEN considered that jackets of poroplastic material and plaster-of-Paris should not be employed, for the muscles were by such supports rather weakened than strengthened.—Mr. BERNARD ROTH expected to hear of a new departure, and was disappointed. He objected to the systematic employment of the recumbent posture, as not calculated to promote muscular tone. The treatment he advocated would be found in detail in Mr. Heath's Dictionary of Surgery.—Mr. JAMES BLACK was convinced that posture and exercise were the correct treatment.—Mr. WALTER PYE thought there were severe cases of scoliosis that necessitated the use of some spinal support.—The PRESIDENT said that Dr. Little had advocated gymnastics for the treatment of spinal deformity twenty-five years ago.—Mr. W. ADAMS said that a combination of different systems for different cases was the correct method of treatment. He did not believe that muscular exercises alone could remove confirmed slowly-produced osseous deformities. The instruments were merely used as passive supports.

Mr. HERBERT ALLINGHAM read a paper and showed cases of a New Method of Excision of the Knee. The operation consists in making a vertical incision over the joint in front, beginning two or three inches above the patella, and prolonged over the patella down to the tubercle of the tibia. The knife splits right through the quadriceps tendon above the patella into the synovial pouch there. The soft tissues over the patella are divided to the bone, the knee-cap sawn through, dividing it into two lateral halves, then the ligamentum patellæ is also split down to the tubercle of the tibia. By this means the joint may be thoroughly exposed by drawing outwards each half of the patella and associated structures to its corresponding side of the joint. The two halves of the patella are wired when the operation is finished. He claimed the following advantages for the operation:—1. The attachments of the fascia lata, the lateral ligaments, and the prolongation of the vasti to the tibia and fibula are not divided, and consequently there is much more support to the joint during the healing process, and when the leg is well. 2. Above the patella the synovial pouches are well opened, and all the synovial membrane can be thoroughly removed. 3. Dislocation of the tibia backwards and tilting of the femur forwards, which commonly occur after the operation, are thus prevented. 4. The joint and the end of the bones can be thoroughly examined, which was not possible by the method of lateral incisions. 5. The undivided quadriceps is a strong antagonist to the hamstring muscles, and should the splint be left off the leg is much less likely to become bent. 6. Progression is greatly improved, the attachment of the quadriceps being neither divided nor the muscles shortened, as must necessarily take place when either the transverse H or U shaped operation is performed. 7. And, above all, as we hope after excision

to obtain movement in the knee-joint, the chances, Mr. Allingham thought, of such a result being brought about will be greatly facilitated by the operation described. In future operations Mr. Allingham said he would remove thoroughly the whole synovial membrane, and only dig out with a gouge the diseased spots on the cartilage, and should not in any way interfere with any of the cartilage that looks healthy. If the crucial ligaments are not extremely diseased they should be left undivided. The joint should be kept at absolute rest until the wound has healed, when passive motion may be commenced.—Mr. WILLIAM ADAMS thought nothing could be better than the result in the case shown.—Mr. EDMUND OWEN considered that the hæmorrhage would be less from the joint in Mr. Allingham's method, which he should certainly practise, but rather as erasion than excision of the joint.—Mr. J. H. MORGAN always avoided excision as far as possible, and this would certainly be obtained by Mr. Allingham's method, which he hoped in future to try.—Mr. ALLINGHAM, in reply, said that a good view of the whole of the interior of the joint could be obtained.

Intra-peritoneal Hæmorrhage in a Newly-born Infant.—Anæsthetics.

At the ordinary meeting held on Monday last,

Dr. KESER read notes of a case of Intra-peritoneal Hæmorrhage in a newly-born infant of the male sex. The child was born at full term on April 29th, and the labour was normal. The child was in a state of apparent asphyxia, but respiration was easily established. There was slight subconjunctival hæmorrhage on the right side. On May 1st swelling of the scrotum was observed, and the penis was œdematous. On May 4th the scrotum was much more swollen. The temperature in the rectum was 98°. The abdomen became swollen and the lips were pale. The cord separated on that day without hæmorrhage. The child died on the ninth day. There was an ecchymosis in the middle of the back. Melæna or hæmatemesis was not observed. The spleen was enlarged, and measured 9 cm. in length, 5 cm. in breadth, and 2 cm. in thickness; the upper half was swollen and congested, and very dark from hæmorrhage, which seemed to have come from a lesion that looked like an infarct. According to Birch-Hirschfeld the size of the spleen in a child eight days old was 4 cm. by 3 cm. The peritoneal cavity was full of dark fluid blood, the amount escaping being about 8 oz. The splenic artery appeared to be normal, as well as the other branches of the aorta. There were no hæmorrhages or infarcts in any other organs. The mother had had eight pregnancies. The first child died at the age of eighteen days, but the cause of death was unknown. After this child five stillbirths occurred. The seventh child was born at full term, was nursed by the mother, and remained well until the end of the fourth week, when epistaxis set in, followed by hæmatemesis and melæna; large ecchymoses appeared on the trunk and limbs, and death ensued after a week's illness. The mother had no tendency to metrorrhagia or to any other form of hæmorrhage. There was no hæmophilic history so far as could be obtained. Spontaneous rupture, as probably occurred in the case recorded, was very rare. Ritter, who collected 132 cases of hæmorrhage in new-born children, had never observed it. Grandidier had observed intra-peritoneal hæmorrhage, but the source of the blood was not discovered. Steffen found a rent in the convex surface of a soft spleen in one case of intra-peritoneal hæmorrhage. Billard found at the necropsy of a child six days old a large quantity of blood in the stomach and intestine, and an enlargement of the spleen, which was ruptured; there was but a tablespoonful of blood in the peritoneal cavity. Dr. Keser could not detect the source of embolism, but believed that there was an infarct in the spleen as the result of arterial obstruction.—Mr. J. H. MORGAN related a case of icterus neonatorum attended with severe hæmorrhages, and due to congenital obliteration of bile ducts.

Mr. MARMADUKE SHEILD read a most elaborate and comprehensive paper on the Administration of Anæsthetics. He indicated the methods to be employed and the agents to be used; and the various operations, circumstances, or diseases which required special plans of administration were dealt with *seriatim* and in detail. He advised Clover's apparatus and ether in the great majority of cases.—Mr. R. BRUDENELL CARTER referred to the difficulties attending operations on the eye when ether was used, and also gave an account of some painful occurrences due to chloroform. Happily, the use of general anæsthetics in ophthalmic surgery was now almost entirely unnecessary.—Mr. BAILEY agreed that ether in Clover's apparatus was the most useful agent. If chloroform is to be given, ether should precede its administration. In young children chloroform must be administered with caution, and indeed should be preceded by ether.—Dr. HEWITT thought that a sudden transition from nitrous oxide to ether was a method to be avoided. The transition should be gradual. Some anæsthetic mixtures were most useful.—Mr. M. SHEILD, in reply, said that some cases of death under anæsthetics were not due to the anæsthesia, but to something in the operation, or to some morbid condition in the patient. Of the value of the expiratory valve in Clover's apparatus he was not quite sure.

OPHTHALMOLOGICAL SOCIETY.

Symmetrical Swellings about Lacrymal Glands.—Atrophy of Iris.—Lamellar Cataract with Triradiate Structure.—Choroidal Hæmorrhage.—Eyes of School Children.—Ecchymosis and Œdema of Eyelids without obvious cause.—Hydatid Cyst of Orbit.—Quinine Amaurosis.

AN ordinary meeting of this Society was held on the 9th inst., Mr. J. Whitaker Hulke, F.R.S., President, in the chair.

Mr. SAMUELSON, of John-street, Manchester, presented to the Society the cover of the blotting-pad and the ophthalmoscope of von Graefe.—Mr. HULKE presented the various ophthalmoscopes shown to the Society at the first meeting of the session, when he gave his presidential address.

Mr. ADAMS FROST showed a case of Symmetrical Hypertrophy in the neighbourhood of the Lacrymal Glands. The growth had been noticed for two months, but no treatment had yet been of avail. It was possible that the swellings were tumours of the same nature as those found in the carotid gland, but here both sides were affected.—Mr. H. POWER had shown a very similar case at the last meeting but one (THE LANCET, p. 823); there was chiefly hypertrophy of fibrous tissue.

Mr. W. H. JESSOP showed a case of Congenital Atrophy of the Iris, in which the anterior epithelial layer was absent and the well-marked radial structure of the pigment exposed. The vision was perfect.

Mr. W. H. JESSOP also showed a case of Lamellar Cataract with the triradiate structure very marked. He was uncertain as to the correct disposition of the lens sectors. The Y-shape was inverted in front and upright behind according to Schwalbe and Quain's Anatomy, but the opposite obtained in the case shown.

Mr. A. Q. SILCOCK showed a case of Hæmorrhage into the Choroid of semicircular shape, situate nearly at the posterior pole of the eye. The question was whether the extravasation was from choroidal, as the Germans said, or retinal vessels, as the English held.—Mr. NETTLESHIP asked for the reasons for attributing the extravasation to a choroidal vessel. The fact that the retinal vessels disappearing in the hæmorrhage were exceedingly tortuous, whilst vessels away from it were normal, was surely in favour of the retinal origin. In some cases a thin layer of retina existed in front of the extravasation. If choroidal, a layer of nerve fibres should be found in front of the hæmorrhage. In some cases a large retinal vessel, previously invisible, was found to have thickened coats or to be actually blocked when the hæmorrhage was absorbed. The shape—circular—favoured the retinal origin, for there was no reason why this shape should occur in the choroid.—Mr. W. H. JESSOP said that in the last volume of the Transactions he had recorded a case of hæmorrhage in which the vision was Jaeger 20. Now all the hæmorrhage had disappeared, and small white spots along the vessel that was tortuous were all that remains; but vision was now perfect. He believed the retina was the seat of the extravasation.—Mr. H. POWER believed such hæmorrhages were choroidal, for a thin membrane, which was probably the retina, was invariably situate in front of them. In Mr. Jessop's case, with perfect recovery of vision, the choroidal view was also favoured, for if the hæmorrhage had been retinal perfect recovery of vision would hardly be possible.—Dr. J. ANDERSON mentioned a case of chronic Bright's disease in which a large hæmorrhage appeared to be in the retina when the fundus was examined after death, though the specimen had not yet been microscoped.

Mr. W. LANG showed a case, in a woman aged twenty-five, of Post-neuritic Atrophy of Optic Nerve, with preservation

of good vision. There was a history of fits before the age of seven, and also of "bilious attacks," with vomiting and attacks of giddiness, during the last five years.

Mr. JACKMAN read a paper on the Eyesight of School Children, based on the examination of 456 children. The cases of ametropia were carefully tested in all, with and without a mydriatic, with the exception of the 32 cases of astigmatism in the Coggeshall Boys' School. In any doubtful case the cornea was examined through a + 10 D lens. The colour sense was examined by means of coloured wools. The 456 children ranged from the age of five to fourteen years, and were scholars at the seven following schools:—Coggeshall National Boys'; Coggeshall National Girls'; Coggeshall British Boys' and Girls'; Kelvedon National Boys'; Kelvedon National Girls'; Kelvedon British Boys and Girls'; Feering Boys and Girls'. The children were not in any way selected for examination. The statistics showed the following percentage for each defect: Ametropia = 19·2; hypermetropia = 6·5; myopia = 2·17; astigmatism = 10·5; anisometropia = 5·04; colour-blindness = 1·7; defective internal rectus = 8·7; strabismus = 2·8. Plans of the seven schools were taken, and the ratio between the window-space and the floor-space noted for each school. Upon comparing these results with the percentage of cases of myopia in each school, no connexion could be traced between the two, as was evident from the following table:—

School.	Window-space to Floor-space.			Myopia.
Coggeshall Boys' ...	1 square foot	: 12 square feet	...	2·1 per cent.
Kelvedon Boys' ...	1 ,,	: 7·7 ,,	...	0·0 ,,
Coggeshall British ...	1 ,,	: 6·7 ,,	...	2·5 ,,
Kelvedon British ...	1 ,,	: 6·5 ,,	...	2·17 ,,
Kelvedon National Girls'	1 ,,	: 5·8 ,,	...	1·88 ,,
Feering	1 ,,	: 5·3 ,,	...	0·0 ,,
Coggeshall Girls' ...	1 ,,	: 5·0 ,,	...	7·6 ,,

Neither could the positions in which the children sit with regard to the positions of the windows be shown to affect directly the amount of myopia in the several schools. The school books used in all the schools were of good print, with the exception of the copy of Shakespeare used for the higher standards; but this was used in the schools which give a low percentage of myopia, as well as those which showed a high percentage. It was therefore necessary to seek further for a cause as to the difference in the amount of myopia noticed in the seven schools under consideration. Of all the Coggeshall school children examined, the percentage of myopia was =3·4; in Kelvedon, =1·2; in Feering, =0. The Coggeshall children were of very low vital stamina; their parents were, as a rule, poor, and the children were raised upon ill-nourishing food, the absence of milk in their diet being particularly noticeable; moreover, their surroundings more nearly approached those of children resident in larger towns. The Kelvedon children were of better constitutions, and milk was more easily obtained in this village. The Feering children were of still better constitutions, and their surroundings more conducive to good health. It therefore seemed probable that the amount of myopia was directly dependent upon the constitutional stamina of the children. In connexion with this point, it was of interest to refer to the percentage of cases of defective internal recti muscles, as a similar ratio was apparent between the constitutions of the children and this defect. In the Coggeshall children the percentage was 12·5; in the Kelvedon, 11; in the Feering, 0.—Mr. ADAMS FROST said that if the vision were tested without the use of atropine, the percentage of myopia was much higher than when atropine was used. Mr. Jackman deserved commendation for drawing attention to other causes than deficient lighting in the production of myopia.—Mr. H. POWER thought that the effect of close work upon girls should be taken into account in appraising the etiology of myopia. One young lady hemmed handkerchiefs, in which there were seventy-two threads to the inch; two at a time were taken up in each stitch, and so vision would have to be much more acute, and the eyes "tried" more in girls, for the letter M would occupy $\frac{1}{16}$ in., the stitch only occupying $\frac{1}{32}$ in. Therefore defective light was assisted by the quality and character of work required to be done.—Mr. EDGAR BROWNE (Liverpool) alluded to certain fallacies in estimating the influence of light in the production of myopia. Different parts of the house or school were unequally lighted. If every inmate of the school could see a strip of sky, there would probably be sufficient light for all purposes. This was an instruction to be given to the architect. Girls in sewing hold the article within six inches of the eyes for fear of pricking their fingers, and of punishment if a false stitch be made. The act of sewing fine things was far more exhausting and exciting to the organs of vision.—Mr. JACKMAN admitted that sewing and lace-making, especially of black lace, were very trying to the eyes.

Dr. ORMEROD read a paper on Ecchymosis and Œdema of the Eyelids without obvious cause. The prominent feature of the affection was that the patient complained of his eye turning black as if from a blow in the course of a night or in a few hours' time. On examination, ecchymosis of the eyelids, or in some cases œdema only was found. Usually pain in the eye or the head preceded the attack, but no injury and no fit. The attacks might be recurrent. Three cases were given where this was witnessed: a man, aged seventy-two, suffering from vertigo and pains in the head; a woman, aged fifty-four, suffering from paralysis of one arm; a woman, aged fifty-five, epileptic. Other cases were mentioned where similar "black eyes" were complained of by the patients. A definite explanation was not attempted, but the possibility of a connexion with migraine was suggested by an observation of O. Berger's. The ecchymoses of tabes dorsalis were quoted to show that extravasation of blood might be caused by disease of the nervous system.—Dr. COUPLAND referred to a case of hysteria in a woman. There were spontaneous hæmorrhages into the skin on both sides, which could not be explained satisfactorily.—Mr. HULKE thought different cases might be grouped together accidentally; in individuals above middle age diseased vessels were common, and straining or other mechanical acts might play a part in causing ecchymosis. In nervous disease, too, affecting one part of the body, the vessels on that side might presumably be more liable to rapid change, and hence become deteriorated in structure.—Dr. HADDEN referred to the case of a young medical man in whom the eyelids became swollen, and remained so for two weeks; no cause could be ascertained, and there certainly was no albuminuria. In another case, that of a young woman aged twenty-four, who came for diarrhœa, there was only frequent defecation, with some œdema about the face. She also suffered from bronchitis. When last seen at the Marylebone Infirmary, myxœdema was considered: there was œdema of the legs, with bronchitis, and œdema of the eyelids, but this last symptom cleared up in a week; the patient died, but the thyroid was healthy. In neither of the cases mentioned was there ecchymosis. He had seen similar local fugitive œdemas in children. The question of their nervous origin was worth entertaining.—Dr. ORMEROD, in reply, said, though the cases occurred in people beyond the middle age, he did not think that arterial disease had any influence in the causation of the hæmorrhages.

Dr. W. A. BRAILEY exhibited specimens, and gave an account of a case of Hydatid Cyst, causing Proptosis, with Cysts in Liver, Lungs, Brain, and other Viscera, and Unilateral Optic Neuritis. The patient, a female child, aged two, was generally healthy till fourteen weeks before death; then the left eye did not close properly during sleep, and she used to wake up occasionally with a screaming fit. Eight weeks later she was admitted into Guy's Hospital, where, on Sept. 28th, she had a convulsion. Then, being taken with whooping-cough, she was transferred to the Evelina Hospital. It was noticed that the liver had a bossy feel, the nodules varying in size from a pea to a walnut. The left eye was markedly proptosed, and directed downwards and forwards. The lids were pinkish and slightly swollen, but the extensively visible sclerotic was quite white. The lateral movements were much limited, and the upward movement was entirely wanting. The pupil was active to light and accommodation; its indirect reflex action was perfect. The optic disc was diffusely swollen and ill-defined. The veins were very large, dark, and tortuous. The vision on this side appeared good. The other eye seemed to see properly; its fundus was quite normal. The child was very irritable, constantly calling out "Oh! my eye!" if examined, or even moved for any purpose whatever. On October 4th, at 6 A.M., she was convulsed for forty minutes. On the 11th the liver was apparently more distinctly nodular. The breathing was irregular, with a great many râles and rhonchi. On the 13th, at 9.30 A.M., she was convulsed for over two hours. The convulsions began on the left side, though the movements were shortly transferred to the opposite side. Then the right hand was clenched, and there was a continuous jerking movement backwards of the hand and arm. The right leg was slightly convulsed. The right eye was turned to the left, and its pupil was widely dilated. The left eye was much congested, and protruded and jerked slightly. The breathing was jerky and

noisy, with a good deal of froth about the mouth. The temperature rose from normal at the commencement of the convulsion till 3 P.M., when it was 104·2°. Death occurred about twelve hours later. At the post-mortem examination a cyst the size of a large walnut was found in the upper part of the left orbit, and its pressure had displaced the eye forwards and downwards. It was actually within the superior rectus muscle of the eye, implicating it from near its origin right up to its tendinous insertion; the muscular fibres were seen to expand as a thin sheet on the posterior part of the cyst, except on its lower and outer aspect, where they were scarcely traceable. Further forwards all trace of them was lost, except on the extreme inner side, where they were continued as an extremely attenuated layer right up to the tendinous insertion of the muscle. The much-enlarged liver showed numerous cysts, projecting as bosses, on its surface, most about the size of a pigeon's egg. Thirty-six could be counted without any dissection. The lungs contained about twenty large cysts, mainly in their lower and posterior parts. There were recent pleuritic adhesions at each base, but no fluid exudation. The spleen showed a very large cyst, nearly two inches in diameter, projecting from its upper part. The right kidney showed a somewhat smaller cyst, and one the size of a pea was found embedded in the left ovary. None were found in the peritoneum. On opening the cranial cavity, the dura mater was found closely adherent to its walls. A cyst, the size of a tangerine orange, was embedded in the posterior superior part of the right cerebrum, where it shelled out easily from beneath the unaffected pia mater. It occupied the region of the right angular gyrus and submarginal convolution. The cysts were those of the Tænia echinococcus.—Dr. HUGHLINGS JACKSON said that the case was one of great interest. He supposed that the left-sided optic neuritis was produced by the hydatid, which involved the right cerebral hemisphere and caused the left-sided fits. He had seen but three cases of uniocular neuritis, in which necropsies had been obtained, and in each the optic neuritis was in the side paralysed, both symptoms depending on tumour of the opposite cerebral hemisphere.—Mr. HULKE thought the concurrence of hydatids of the orbit with hydatids elsewhere was remarkable. In two cases—boys, aged fourteen and twelve—of hydatid of the orbit that he had seen, these were the only tumours.—Mr. NETTLESHIP asked whether there was any inflammation about the hydatids.—Dr. BRAILEY, in reply, said there was nothing unusual around the hydatid in the orbit; it actually replaced the superior rectus. He considered that the proptosis caused the neuritis, but deferred to the authority of Dr. Jackson.

Mr. EDGAR BROWNE read a paper on a case of supposed Quinine Amaurosis. The diagnosis in the earlier recorded cases of quinine amaurosis had been facilitated by a knowledge of the amount of the drug taken. In this case the quantity was not clearly ascertained. The patient was a powerful man, aged thirty-four; had syphilis in 1877; was carefully treated; was temperate; formerly a heavy smoker; general health perfect. Fell into the water at Shanghai on Jan. 3rd, 1886; had a rigor next day, followed by pneumonia. On Jan. 6th his temperature was 104°. Was told he was taking quinine to reduce his temperature. On Jan. 7th his temperature rose to 105°, or more. The patient believed the quinine was increased to thirty grains every two hours, but there was no professional note of this amount. Patient thought he had taken about 120 grains in this way. Towards afternoon he had a "confusion" in the ears, and became very deaf. About 4 P.M. there was a flickering before his eyes, and he suddenly went completely blind, "as if they had turned out the gas." He had a double perception of the difference between dark and tropical sunlight, but he could not perceive the flame of a candle a few inches from his eyes. The pupils were widely dilated. At the end of six weeks he began to see objects in bright sunlight, and his central vision rapidly returned. Slight paresis of internal rectus. No sign of syphilis, except a doubtful enlargement of posterior cervical glands. Patellar reflexes normal. Fields for white very contracted; greatest diameter nowhere beyond 20° from fixing-point. Optic discs very pale; vessels extremely small and contracted. Hearing perfect. From that time to Dec. 4th scarcely any change had taken place, except a slight failure in central vision of left eye. He could distinguish a light thrown from a short-focus mirror (as in testing the sensibility of the retina in cataract) up to the periphery. He was placed in great difficulties by his telescopic vision, and constantly ran against things. He was in remarkably good health, with no sign of cerebral or spinal mischief, except perhaps the slight paresis of the rectus. He had collected references to eighteen cases, including his own. The symptoms were blindness and deafness of a very marked character—deafness first in order of time, temporary in duration, and recovery rapid. In two cases twenty-four hours, one ten days, and in one some permanent impairment. The onset of the amaurosis was sudden or very rapid, more complete than was known in any other recoverable condition. It resembled the dense darkness of atrophy, for which one case was mistaken. In one case the deafness and blindness were so complete that communication was only possible by touch. In cases examined by the ophthalmoscope early, a whitish haze with a central cherry-coloured spot was observed at the macula, as in embolism. The retinal vessels were always extremely contracted. In one case the contraction was first noted on the eighth day of the blindness, the first examination being on the fourth. The optic discs were pale, pupils always widely dilated, and insensible to light. In one case accommodation-reflex (convergence) was present. Hence it might be inferred that the state of the pupil was due to the blindness, and not to affection of the third or sympathetic. The mobility of the pupils was restored. Duration of the blindness very remarkable. No perception of light existing for three or four days, six weeks, and even seven months. Recovery of central vision when it commenced was rapid. There was central colour-blindness in early convalescence. Out of eighteen cases, no contraction in four; contracted for colour, one; no notes, two; great contraction, eleven. In one case there was central scotomata, but it was not noted if the patient was a smoker. In some cases the field widened somewhat, but in pronounced cases it is never fully restored. The perceptive portion of the retina corresponded to the non-vascularised space around the macula, exactly the opposite condition as regards parts of the retina affected in axial neuritis, when there was central scotoma with peripheral perception. This pointed to a more decided demarcation of the central from peripheral retina than was usually described. Recovery of central vision was generally perfect; permanent blindness not having been recorded. The quantity of quinine taken ranged from 180 grains in a single dose, 100 grains per diem for four days, to 46 grains per diem for eight days in adults. The resemblance to embolism or hæmorrhage into the optic nerve was obvious, but the bilaterism and complete recovery of central vision negatived these. The retinal ischæmia seemed local; there were no signs of general cerebral anæmia. The influence of the vaso-motor system must be considered. The first effects of toxic doses of quinine were felt in the labyrinthine circulation. It was supposed that the inferior cervical ganglion was especially affected, and the condition was hyperæmic. It seemed unlikely that hyperæmia of the labyrinth should coexist with retinal anæmia from the same mechanism. The deafness was temporary, while the peripheral blindness was permanent. The affection was probably local. The seclusion of the arteries was not retro-ocular nor quite complete, or atrophy of the optic disc would be a probable sequence. There was no sign of periarteritis, nor was there any pressure, veins and arteries being alike attenuated. Quinine applied locally causes contraction of minute bloodvessels. Highly cinchonised blood, passing into a peripheral circulation unprovided with anastomoses, might deposit sufficiently to prevent the ingress of blood till such time as the contraction has become permanent. Information was needed on the appearances in the early stage of the amaurosis, whether the pupil reacted to myotics, what was the condition of the optic disc, and whether there was any fluorescence of media or retina.

SOCIETY OF MEDICAL MEN QUALIFIED IN SANITARY SCIENCE.—At a meeting of the members of this Society on the 14th inst., it was reported that the Council had been in constant communication with the various medical corporations, the universities, and the General Medical Council, with a view of procuring a similarity in the nomenclature of the title of diplomas in sanitary science, and had strongly recommended that "Diploma in Public Health" be the style adopted for registration. Dr. Alfred Carpenter gave an address on "The Duty of the State to foster the Cultivation of Sanitary Science." Sir J. Fayrer afterwards strongly supported the views put forward, and Mr. J. F. Sykes read a paper on "The Sanitary Medical Service as a Career."

Notices of Books.

A Text-book of Human Physiology, including Histology. By Dr. L. LANDOIS. Translated from the Fifth German Edition, with Additions, by W. STIRLING, M.D. Second Edition. Two Vols. London: Charles Griffin and Co.—This edition of Dr. Landois' work has been thoroughly revised, and many corrections and additions have been made by the translator. It is the only text-book of physiology with which we are acquainted in which the practical bearings of physiology on medicine and surgery have been constantly borne in mind both by the editor and translator. If the contents of this treatise were thoroughly mastered by the student during his first two years of study, he would enter the wards of his hospital fully competent to understand that disease is only a modification and perversion of normal processes, and not a separate entity to be expelled by certain drugs. Dr. Stirling has added a chapter on the action of drugs, and the chapters on the nervous system have been considerably modified. A great improvement has been made in adding a very copious bibliography, which refers the student to the principal sources of the information contained in each chapter. The number of the woodcuts has been augmented by nearly 100 figures.

Commercial Organic Analysis. A Treatise on the Properties, Modes of Assaying, and proximate Analytical Examination of the various Organic Chemicals and Products employed in the Arts, Manufactures, Medicine, &c. By ALFRED H. ALLEN, F.I.C., F.C.S., Public Analyst for the West Riding of Yorkshire, &c. Second Edition, Revised and Enlarged. Vol. II.: Fixed Oils and Fats, Hydrocarbons, Phenols, &c. London: J. and A. Churchill. 1886.—Mr. Allen's book supplies a great want, and has been used with gratitude in every well-appointed laboratory. His new edition, of which this is the second out of three promised volumes, has been prepared with great care and enormous labour. One-half of the present volume is devoted to the fixed oils and fats; the other to hydrocarbons and allied bodies, including the terpines and benzene. The author has wisely refrained from discussing the coal-tar industry as a whole, although he has given much valuable matter in regard to it. He may, perhaps, give us a separate volume upon it, and we hope he will, for he has a great power of lucid writing and arranging; but he could not have done justice to the subject in a small space. What he has attempted he has attained and those portions of his work which are before us are crowded with information often original and always well compiled, with full and fair references to original authorities. We may point to the sections on soap, in which the recent work of Dr. Alder Wright and others is summarised, as a good example of his style.

The Chemistry of Wheat, Flour, and Bread, and Technology of Bread-making. By WILLIAM JAGO, F.C.S., F.I.C., Analytical and Consulting Chemist, Head Master of the Science Schools, Brighton. Brighton: Published by Wm. Jago. 1886.—This is a useful, and, as far as we have tested, a trustworthy, scientific, and practical treatise on the industry of wheat, with a fairly complete account of existing knowledge and practice, and some original matter. The first five chapters are occupied with general principles and elementary facts, partly chemical, partly physical. This part seems good, but we doubt the wisdom of inserting an elementary text-book in a special manual such as this; there are plenty of well-known and very cheap works which give all the necessary information. Then follows a more detailed study, accompanied with directions for experimental work, of the constitution of wheat and flour, the carbohydrates and albuminoids (this last chapter might have been longer), and a good account of fermentation. The chapters on yeast are valuable, and show much original work. The sorting, so to speak, of yeasts by the microscope has of late years been recognised as a matter of the utmost practical importance. Full directions are here given, not only for this examination, but for the valuation of yeast by quantitative methods. The succeeding chapters are mainly devoted to the technology of flour and bread, while the rest of the book is mainly analytical, with a concluding chapter on adulteration, which is much too short. In the sixteenth chapter a good account of the viscometer and its indications is given. This instrument is employed for ascertaining the stiffness and tenacity of dough, and is said to be a valuable help to millers and bakers.

Sketch-book for Ophthalmological Observations of the Fundus of the Eye. By Dr. O. HAAB. London: Trübner and Co.; Zurich: Hofer and Burger. 1886.—This is a very handy and useful little book. It easily slips into the breast-pocket, and consists of a series of plates representing the fundus of the eye in vermilion with the optic disc. Some have, some have not, the retinal vessels. To enable the observer to insert the vessels a pencil is provided, with a bright red for the arteries and a dark red for the veins. The pencil has a cap with a piece of indiarubber attached, with which it is easy to expunge part of the vermilion of the plates, and in this way with the utmost rapidity an even inexperienced draughtsman can make a fair drawing of the eye when affected with choroiditis or hæmorrhages or with retained sheath. Every ophthalmologist should have one of these convenient little books in his possession.

Social Arrows. By Lord BRABAZON. London: Longmans, Green, and Co.—It will not be denied that the prosperity of a nation depends largely on the national care of the physical well-being of women and children. Lord Brabazon draws attention to the fact that unless some speedy change is made in the social condition of some of our women and children, the nation must inevitably deteriorate in the next generation. The utter absence in many large towns of adequate public playgrounds is a serious evil, as it is impossible for children to develop into healthy men and women without sufficient air and exercise. A public playground has been opened in Horsemonger-lane, and some also in Manchester and Salford. It has been found by the Metropolitan Public Garden Association that a playground can be daily provided for 3000 children at a cost of £100 a year. Horsemonger-lane playground contains a gymnasium, swings, running-ground, giant stride, fives court, and many other advantages. After 6.30 P.M., the young men of the neighbourhood are allowed to enter the boys' enclosure, and the young women that of the girls. There can be no question of the inestimable boon thus conferred on thousands of our poorer fellow-creatures, and the advantage to the national welfare will be great in its influence on the health of the people. Many efforts have been made of late years to shorten the hours of labour for various classes, but there still remains a class for whom legislation is necessary. Lord Brabazon states that girls in shops and refreshment-rooms are kept standing for an unpardonable length of time. In places of public refreshment girls work alternate days fifteen and eighteen hours, with but a very short interval for food. Many of the shop girls also work for fourteen hours. The effects of these long hours are most injurious in every way. That it is physically injurious it scarcely seems necessary to remark, and it appears also to be so morally. Many return home broken in health, and there are numberless sad tales of insanity, phthisis, bronchial affections, chronic dyspepsia, and other maladies. It must be said that many of the shopkeepers would willingly abridge the hours could it be made incumbent on all shops to close earlier. It is impossible to touch on more than one or two points in this most interesting book. Lord Brabazon

does not confine himself to the subject of women and children; he takes up the question of State-directed emigration, cultivation of flowers, young men's clubs, and many other things. The book is written throughout in a clear, sensible, temperate manner, and is well worth reading.

The Techno-Chemical Receipt-book. Containing several thousand Receipts covering the latest, most important, and most useful discoveries in Chemical Technology, and their practical application in the Arts and the Industries. Edited chiefly from the German, with additions, by W. T. BRAUNT and W. H. WAHL. Philadelphia: Henry Carey, Baird, and Co. London: Sampson Low and Co. 1886.—Although there are several good English technological receipt-books, and although they are not of primary importance to members of the medical profession, we notice this little book, first, because it is good of its kind, and likely to be useful in the thousand and one non-medical difficulties about which the "doctor"—often the only scientific authority in a district—is consulted; and, secondly, for the unpatriotic reason that it is "chiefly from the German." Whether the Germans are or are not superior to us in technical skill, all Englishmen will gladly acknowledge that they are skilful and industrious, and will be grateful to any compiler who collects in the English language the results of their labours. Five hundred closely-printed pages, well filled with useful matter, with alphabetical arrangement, a good index, and a table of contents almost as full as the index, make up a book which will be valuable in every house.

Brain. A Journal of Neurology. Part XXXV., October, 1886. London: Macmillan and Co.—The number opens with two papers of a controversial kind. Professor Schiff, aroused by Professor Horsley's strictures upon his experiments on Cerebro-spinal Physiology, gives a reply thereto, and hints that his opponent has not made himself sufficiently acquainted with the details of those experiments. Schiff, as is well known, is opposed to the commonly accepted doctrine of the motor functions of the brain cortex; and, moreover, believes that the posterior spinal columns are directly related to the excitable area in question. Professor Horsley follows with a spirited rejoinder, in which he demonstrates not only his full acquaintance with Schiff's work, but the fallacies that underlie his conclusions. Dr. Parinaud of Paris contributes a paper on Paralysis of the Movement of Convergence of the Eyes, and Dr. Sherrington one upon Two newly-described Tracts in the Spinal Cord—viz., the ascending antero-lateral tract (of Gowers and Hadden) and a tract of small fibres described by Lissauer at the junction of the lateral and posterior columns. Dr. Sherrington proves by developmental studies the independence of these tracts. Mr. Bland Sutton has a readable paper on the Lateral Recesses of the Fourth Ventricle, and their relation to certain Cysts and Tumours of the Cerebellum and to Occipital Meningocele. Mr. Birt raises the important but difficult question of changes in the urine due to nerve-metabolism in a paper on Urinology of the Insane. Dr. James Anderson gives notes of an interesting case of Tumour at the Base of the Brain, with a valuable commentary; and Dr. Hale White supplies a "critical digest" on recent advances in knowledge of Tabes Dorsalis.

Manuel Pratique de Bactériologie. Par EDGAR M. CROOKSHANK. Traduit par M. BERGEAUD. Ouvrage orné de 32 planches et de 44 gravures sur bois. Paris: George Carré. Bruxelles: A. Manceaux. 1886.—This is a literal translation of Mr. Crookshank's well-known treatise, and it speaks much in favour of the original work that the translator has not found it necessary to add any notes or observations. As far as we have compared the translation with the original, it appears to have been executed with care and fidelity. The plates are as good as those in Mr. Crookshank's work, which are, perhaps, a little too highly coloured.

The Physician's and Surgeon's Visiting List, Diary, Almanack, and Book of Engagements for 1887. Forty-first year. London: John Smith and Co., Medical Stationers.—We can cordially recommend this established Visiting List to our readers. The spaces attributed to the daily journal and the visiting list are convenient, and the tables and lists of drugs in the new Pharmacopœia and of American eclectic drugs, with the proper doses, make it very useful. Under the head of Baths, some instructions for cold baths in case of pyrexia should be included. The members of the councils of the principal medical corporations and of the General Medical Council should be given. But there is little to desiderate and much to praise in Smith's Visiting List.

Parkins and Gotto's Monthly Pocket Diaries present a feature which appears of a novel kind. There is a part for each month and a page for each day in the year, so giving plenty of room for entering a number of engagements, and only necessitating the carrying of one or two of the parts at most, which may be easily slipped into a letter-case.

CHRISTMAS LITERATURE.—*The Land of Little People* (Poems by FREDERIC E. WEATHERLY; pictures by JANE M. DEALY—London: Hildesheimer and Faulkner)—is a very pretty little Christmas book for the entertainment of the young folks during the approaching festive season. Both text and illustrations are of undoubted merit, and do credit to poet and artist. The same firm publish *Christmas Cards* of great variety, and some of them of remarkable excellence.—The Christmas Numbers of the *Graphic* and *Life* have been received. The former will no doubt be in great demand, as it is fully equal to, if it does not even surpass, any of its rivals.

New Inventions.

PORTABLE HYPODERMIC SYRINGE.

THIS portable hypodermic syringe is made entirely of metal, resembling an ordinary pencil-case, and may at all

times be conveniently carried in the pocket. The small glass bottles hold one fluid drachm, and are made to be withdrawn from the metal casing so as to facilitate their being filled. The needle is screwed in the piston-rod. The instrument in its entire length is 4½ in., and may be obtained from Messrs Krohne and Sesemann, Duke-street, London, W.

A. HERBERT BUTCHER,
Surgeon, Birkenhead Borough Hospital.

TESTIMONIAL.—The inhabitants of the mining districts of Carrizal Alto, Carrizal Bajo, and Cerro Blanco, Chili, have recently subscribed a sum of £200 to purchase a testimonial to be presented to Dr. William M. Johnson, who has served during the past ten years as medical officer to the Carrizal Hospital, and has attended the different mining establishments in the districts. During his long residence he has gained the love and esteem of all, both Europeans and natives, by his skilful treatment and his exceptional philanthropy. The proceeds of the sum subscribed have been sent to England to be devoted to the purchase of a valuable case of instruments, a gold watch chronograph, and a massive salver of pure gold, bearing suitable inscriptions expressing the regard and remembrance of the subscribers.

THE LANCET.

LONDON: SATURDAY, DECEMBER 18, 1886.

To say that we are disappointed with the circular just issued by the Council to the Fellows of the College respecting the admission of Members of the College to vote at the election of the Council, and to be themselves eligible to sit on the Council, would be a very inadequate expression of the feelings which possessed us on reading that document. These feelings are evidently similar to those which prompted "Historicus" to lose no time in issuing his note of warning and remonstrance. Were it not for an experience of the Council extending over more than fifty years, we should have thought that there had been inadvertence in framing the questions which have been submitted to the Fellows. But looking back to the times just antecedent to the granting of the Charter in 1843, when the "new class of members" was instituted, to the arguments then used, and to the tactics adopted, we cannot avoid the conclusion that the present Council (like the old one) are deliberately throwing dust in the eyes of the constituency, with a view to the maintenance of their own monopolies, to a continuation of the *status quo*, or to making the very least concessions with which the Council may satisfy the favoured few who have at present some feeble voice in College concerns. As issued, the circular implies that the Council are anxious to enlarge the privileges of the Fellows—to enable them to vote by voting-papers, without personal attendance at the College, while in reality very heavy pressure has had to be brought to bear before even this scanty concession could be wrung from them, although forty years have passed during which London has practically enjoyed this monopoly, as flagrant as it is unjust. Moreover, in seeking the opinion of the Fellows as to whether Members of the College should sit on and vote for members of, the Council, the restrictions which the Members themselves would impose are omitted; thus leaving it to appear as if Members were asking for identical privileges with the Fellows. Now the omission from the questions put to the Fellows of these restrictions is undoubtedly calculated to pervert the answers which will be returned. Such tactics on the part of the administrators of a public institution are altogether unworthy, and deserve the severest condemnation. The Fellows, we hope, will not so far lend themselves to this device as to give simple answers, Yes or No. We trust they will amplify the questions for themselves, or adopt as answers the resolutions passed at the general meeting on Nov. 4th.

Those resolutions were in effect as follows:—It is desirable that Members of the College should be empowered to vote in the election of the Council, and be eligible to sit on the Council, provided that, in order to be eligible to sit on the Council, a Member must have at least twenty years' standing; to vote at the election of councillors a Member must have, say, ten years' standing; and in order to give the Fellows a due and proper preponderance in the Council, not more than one-fourth of the whole Council should consist of Members of the College. Let Fellows, before returning their circulars to the College, compare and contrast the foregoing proposals as they emanate from the Members with the unconditioned questions as propounded by the Council. What a difference! The one guarded by wise restrictions; the other bare, unqualified, and misleading: in fact, a totally new issue. Let those who have not yet read Mr. HOLMES' speech at the meeting on Nov. 4th carefully do so. They will then see what it is the Members wish for, and the arguments that may be legitimately put forward in support of their contention. In issuing so bald a statement, the Council have laid themselves open to a charge of desiring to mislead the Fellows, to get their opinion on an issue not properly before them. Whether Members of the College of Surgeons shall vote is not the whole question. Holding as we do that a return of the original idea of membership—a brotherhood—will raise the professional status of each man individually, and of the whole corporation as such, and that it will conduce to the better management of the College, the question is a much wider one than it at first sight appears, and one which affects the general public as well as the State.

It is pretty clear to us that, whichever way the vote may go, the Members will have to look after themselves. Every inch of ground will have to be fought—and that, too, with a silent, self-satisfied Council. We should think that early in the new year the petition to Her Majesty ought to be presented praying for a new Charter. The Jubilee year will be a most propitious epoch to seek for such a boon—a Jubilee Charter of emancipation, restoring the rights of membership to those who have so long been strangers and outcasts in their own house!

IN February of this year the Liverpool Medical Institution appointed a Committee to inquire into the frequency with which abdominal section was performed, and more especially for spaying, or the "removal of the uterine appendages," at the Hospital for Women. The Committee consisted of the President of the Institution, three past Presidents, a Vice-President, and three past Vice-Presidents. The medical officers of the Hospital for Women were invited to send each a representative to the Committee; two availed themselves of the offer and one did not. The mode of conducting the inquiry was fair and reasonable, was calculated to do full justice to the medical officers, and at the same time to bring out the facts bearing on the subject of inquiry. The lay Committee of the Hospital for Women facilitated the work of the Committee of Inquiry. Each one of the medical officers of the hospital was asked to furnish reports of all the cases of abdominal section performed by him in the hospital. These reports were submitted to, and annotated by, the medical board of the hospital, and subsequently laid before the Committee of Inquiry. The medical practitioners of Liverpool who had cases under their care which had been operated on in the hospital were invited to supply information respecting the progress of the cases after the operation; and between forty and fifty of the patients who had been made the subjects of abdominal section were personally visited by the Committee. The Committee also examined the register of the hospital, and questioned the lady superintendent and nurses.

The following conclusions were arrived at: That the cases submitted to "ovariotomy" were fit and proper, and that the operation was done successfully; that the operations for "exploratory incision" were justifiable; that the operations for "oöphorrhaphy or the replacement and fixation of prolapsed ovaries" were insufficient in number to enable the Committee to form a strong opinion for or against the proceeding, but that the relief afforded by the operation was by no means clear and decided; that sufficient care and discrimination had not been exercised in the selection of cases for spaying, and that in many instances the gravity of the symptoms was not such as to have justified abdominal section of any kind; that in ordinary cases of pelvic hæmatocele spaying is not to be recommended; that the reports of the cases in which spaying was performed for "bleeding myoma" "signally fail in giving any description of the size and character of the myomata, or of the state of the uterus when the abdomen was opened at the time of the operation"; and that certain patients were reported as cured when the patients themselves stated that they still suffered from hæmorrhage. The Committee further finds that of ninety-two patients submitted to the operation of spaying, fifty-nine were between twenty and thirty years of age, and seven were only between seventeen and twenty years; that a considerable proportion of the subjects of it suffered a distinct loss of sexual feeling, and to such an extent as to cause serious domestic unhappiness in not a few instances; and that some of the patients complained of such a loss of physical energy and spirit as prevented them from discharging their ordinary household or other duties as they did before the operation. Many of the patients suffered from hernia in consequence of the operation. Many were distinctly and probably permanently benefited, while nearly an equal number experienced no decided and lasting benefit, while in some the operation proved injurious. The Committee finally recommends that no patient should be spayed by any officer without consultation with a colleague and that the patients should be clearly informed of the nature of the operation and its possible consequences; for the Committee say that the patients examined by them very generally denied that sufficient information—or, indeed, any information at all—was given them respecting what was proposed to be done to them.

The report of this Committee is calculated to do much good by throwing light upon the indiscriminate way in which spaying is had recourse to, and upon the results of cures effected by it. We have frequently pointed out these facts, and again and again stated that recovery from the operation is not a cure of the patient. It comes out clearly in the report that patients are spayed in cases in which it is not calculated to give relief, for about the half of those who were operated on obtained no decided or lasting benefit. The report is calculated to check indiscriminate spaying and to confine the operation to the few cases in which it is really indicated.

WORKHOUSES usually escape the keen criticism and amateur inspection that modern philanthropy bestows on the working of most institutions set apart for the benefit of the poor, and which, when properly conducted, provide a useful and efficient check on abuses. Workhouse visiting is not popular among ladies, and the consequence is that very little is known to the outside world of what takes place inside these institutions, so that when some scandal occurs blame is too often laid on the wrong shoulders. We ought, therefore, to be grateful to anyone who, having been behind the scenes and having become acquainted with details of workhouse life, gives us an impartial account of the state of affairs, and who also suggests practical remedies for existing evils. And this was done, and well done, by Miss LOUISA TWINING, in the last number of the *Nineteenth Century*. Miss TWINING admits that great improvements have taken place within the last thirty years, since THE LANCET, with the aid of its Special Commission, of which the late Dr. ANSTIE was the head, exposed the horrors of the London Workhouse Infirmaries, an exposure which resulted in the movement that ultimately led to the passing of the "Gathorne Hardy Act," which brought about the amalgamation of several unions to found the noble sick asylums now distributed over the metropolis. Nevertheless, from time to time, in spite of improved regulations, instances of gross cruelty become public which lead us to doubt whether, after all, the improvement is more than what appears on the surface. So long as aged and infirm paupers continue to be scalded to death in hot baths, or epileptics and imbeciles to be roasted or beaten to death by their imbecile attendants, we must feel that, in spite of the good intentions of the Poor-law Board, guardians do not always obey the wholesome provisions laid down for their guidance, and that workhouses in this country are sometimes the scenes of abominable neglect, if not of direct cruelty.

And, again, there are cruelties that never come to light. The class from which the workhouse officials are drawn is certainly not one to which much power ought to be given. Dealing with an admittedly refractory and troublesome race, the callousness which the administraton of an iron discipline engenders often tends to convert these officials into petty tyrants rather than intelligent administrators of State charity. We will give one instance only, which has come under our notice, and which occurred in one of our admittedly best-managed workhouses. A poor woman, aged seventy, who for years had kept a small lodging-house till her husband died, had a stroke of paralysis, and, being no longer able to work, went into the workhouse. She begged hard to be allowed to retain her under flannel petticoat, which had been given her by a charitable lady, but to no purpose. It was taken from her, and she had to wear the ordinary thin garments served out by the authorities. Now, the deprivation in this case was decidedly an act of uncalled-for tyranny, for although uniformity in dress may be one of the laws of the workhouse, still the authorities in special circumstances can order additional garments for the conspicuously infirm. In this case the leg that was paralysed, owing to deficient circulation in it, was subject to severe sciatic pains in cold weather. So this poor woman was condemned to suffer every winter to satisfy the master's or matron's love of uniformity, for if she is allowed her petticoat, "all the old women in the ward will be clamouring for one too!" Besides such acts of indirect cruelty, there is sufficient evidence to show that drunkenness, peculation, and other evil practices are, especially in provincial unions, more common among the workhouse

officials than is generally supposed; whilst the supposition that anything is good enough for the pauper leads to negligence among the officials in the selection and preparation of the food, of which, of late, numerous complaints (mouldy bread, carbolised broth, &c.) have appeared in the daily press.

Miss TWINING proclaims the urgent need for a higher class of workhouse officials, and points out that the posts are worthy of the intelligence, love, and zeal of the many educated men and women who are now seeking remunerative work, and who will find in the administration of these large institutions an occupation worthy of their best energies. Miss TWINING is equally strong in advocating the admission of students of medicine into Poor-law infirmaries, a point our Commissioners insisted on in their Report on Workhouse Infirmaries in 1880. When it is considered that 600 or even a larger number of patients are often under the care of only two medical officers, it cannot be but that many of the minor attentions which add so much to the comfort of the sick must be dispensed with, whilst with such an inadequate medical staff the due supervision of the nursing becomes a difficulty. Lastly, a cruelty of the worst kind is in constant operation in the promiscuous mixing of all classes of paupers in common wards. The present system calls loudly for revision and alteration, for what can be more painful than for respectable men and women to find themselves thrust into the society of sturdy ruffians who make use of the workhouse as a convenient hotel, and who, being able to take their discharge with twenty-four hours' notice, can claim readmission whenever it suits them, whether drunk or sober.

INQUESTS and police-courts afford from time to time abundant evidence not only of the unsatisfactory condition of the law governing the burial of still-born children, but also of general ignorance of the law as it exists at present, and of consequent neglect of its enactments. The burial of still-born children is regulated by the 18th Section of the Births and Deaths Registration Act of 1874, which enacts that no person "who has control over or ordinarily buries bodies in any burial-ground" may permit the burial of the body of any deceased child as if it were still-born, or may permit the burial of any still-born child except on the production of one or other of certain certificates. To render legal the burial of a still-born child in any burial-ground there must be produced to the sexton: (1) a written certificate purporting that the child was not born alive, signed by a registered medical practitioner who was in attendance at the birth, or who has examined the body of such child; or (2) a declaration signed by some person who, had the child been born alive, would have been legally qualified by the Registration Act to give information concerning the birth, to the effect that no registered medical practitioner was present at the birth, or that his certificate cannot be obtained, and that the child was not born alive; or (3) an order of the coroner in case an inquest has been held. It is further enacted that anyone acting in contravention of this section is liable to a penalty not exceeding ten pounds. Such being the legal enactments on the subject, it follows that unless a medical certificate of still-birth can be obtained, the furnishing of which is optional on the part of the medical practitioner, the written declaration of still-birth may be given by the father or the mother of the child, by the occupier of the house in which the child was born, or by any person who was present at the birth of the child—these being the persons who would have been legal informants of the birth for registration purposes had the child been born alive. It is patent that declarations of still-birth may in certain cases be produced with dangerous facility—more especially bearing in mind that these declarations pass direct from the hands of the person whose interest it is to get the body buried, into the hands of the person whose interest it is to effect as many of such burials as possible. The Registration Act, moreover, omits to schedule the forms of these certificates and declarations, and it is useless to expect the ordinary sexton of a burial-ground to be an efficient judge of the legality of such documents as are produced to him in justification of his right to bury still-born children. There seems to be no sufficient reason why these forms should not be supplied by the Registrar-General through his local registrars, and that the use of such recognised forms should be insisted upon by the Home Office. It would, moreover, afford a greater security against malpractices if the certificates and declarations were furnished to the local registrar, who, if they duly complied with the law, should issue an order for burial. The use of such authorised forms might also be made the means of supplying information as to the number of still-births in England, of which no record now exists, and in which respect our vital statistics are inferior to those of almost every other country in Europe.

A recent inquest case in Yorkshire accentuates the necessity for the dissemination of more accurate knowledge of the present state of the law on this subject, even among those whose especial duty it is to inform themselves thereof. The sexton admitted having buried several so-called "still-born" children without the production of any certificate or declaration of still-birth; and in the case which was the subject of the inquest referred to, the declaration was entirely informal. This declaration was informal because it was signed by a woman who was not present at the birth and would not, therefore, have been a qualified informant of the birth had the child been born alive; and, secondly, because it did not state that no registered medical practitioner was present at the birth, or that his certificate could not be obtained. The coroner, moreover, although fully alive to the dangerous tendencies of the facilities which now exist for burying deceased children as still-born, appears to have been but partially informed as to the actual state of the law on the subject. We hope, however, that other coroners will follow his example by holding inquests in all such cases in which laxity prevails with regard to the burial of still-born children.

AT a meeting of the Council of University College, Dundee, held on the 12th inst., a letter was read from Mr. T. H. Cox, offering a donation of £12,000 for the endowment and equipment of a chair of Anatomy in connexion with the College. Mr. Cox, in his letter, states that the people of Dundee should now show they have taken up seriously the proposal to establish a medical school in the town. He adds that he wishes this donation to be received as his gift to Dundee to commemorate the Queen's Jubilee. The Council thanked Mr. Cox for his gift.

Annotations.

"Ne quid nimis."

THE TEACHING UNIVERSITY FOR LONDON.

THE meeting held at King's College on the 15th inst. for promoting the movement in favour of a Teaching University was very sparsely attended, only thirty or forty out of the 400 members of the Association being present. From the report which was presented and the speeches that were made, it would seem that the professoriate and councils of King's and University Colleges were mostly in favour of the scheme, and that it had the support of many London physicians and surgeons, Guy's Hospital being especially mentioned. Very little encouragement is anticipated from the University of London, although a final reply has not yet been obtained from the Senate. The Colleges of Physicians and Surgeons have merely acknowledged the receipt of a communication proposing a conference, but have taken no action thereon. Power was granted by the members of the Association who were present at the meeting to the Executive Committee to "approach Her Majesty's Government for the purpose of obtaining from the Goverament and Legislature the necessary measures for forming a teaching university in London." It was clearly apparent that the Association, whilst NOT opposing the granting of a degree in medicine and surgery under the authorities of the combined Colleges, would use all its influence towards turning such a degree from a strictly professional into an academic one, and would strive to widen the basis of the collegiate movement, so as to secure, if possible, the admission of faculties of arts and science as well as of medicine. This might be successful, if we could really believe in the vigour and earnestness of purpose of the members as well as of the executive; but Wednesday's meeting makes us doubt whether, notwithstanding the lengthy reports and the conferences, there is any real interest taken in the movement by the teachers of arts and science, or even of medicine, in London.

PROMOTION IN THE ARMY MEDICAL SERVICE.

WHEN we lately brought under the notice of our readers the great want in the Army Medical Service of any acknowledgment of or reward for meritorious professional services, we did not anticipate that we should so soon have occasion to comment upon the very unsatisfactory results of the system now in operation. In a supplement to the *Gazette* of Nov. 26th, Surgeon-Major W. H. A. Mackinnon was promoted to the rank of brigade surgeon in recognition of his services in Burmah. He happened to be the senior medical officer with the British Force at Mandalay, and was in consequence selected for a reward. But his position as one of the most junior of the grade of surgeons-major ranking with lieutenant-colonels involved his superseding more than ninety officers senior to him in the Department, many of whom have done right good service without reward, and who would have been delighted to have had a chance of being employed on active service. In addition to the injustice done to so many officers by his promotion, there was another point of great importance involved in it. From his position on the list, it is doubtful whether he has been called upon to undergo the qualifying examination laid down in the Army Regulations as imperatively required to be passed before a surgeon-major is eligible for the post of brigade surgeon, and if so the promotion was contrary to the regulations of the service. Possibly from a consideration of these circumstances the *Gazette* of Dec. 14th intimates that "The promotion of Surgeon-Major W. H. A. Mackinnon to the rank of brigade surgeon, as stated in the *Gazette* of Nov. 26th, 1886, is cancelled, this officer having been granted the distinction of Companion of the Distinguished Service Order." We congratulate the medical officers senior to Mr. Mackinnon upon this reversal of an act of manifest injustice, and Mr. Mackinnon himself upon the acknowledgment of his services by an honorary reward. But the whole proceeding seems to us to raise an important question. By whom was the original mistake committed? Bearing in mind the history of the Army Medical Department, the difficulties it has experienced in getting a sufficient supply of eligible candidates to fill its ranks, and the care with which the present regulations were drawn up with a view to promote efficiency and allay discontent, it is of the utmost importance that anything like injustice should be prevented. Drawing our conclusions from the statements which Sir T. Crawford has repeatedly made to the officers of his department of the principles upon which his selections for promotion are to be based, and from the sound judgment and fairness which have hitherto characterised his rule, we do not believe that the promotion was made on his recommendation, and on this point we think that the Secretary of State for War should institute an inquiry and take steps to prevent the possibility of a similar mistake. It seems most desirable that in all cases the recommendation for a reward for meritorious service should emanate from the head of the department to which the officer belongs, and that all reports bearing upon the subject should be submitted to him for his consideration. In this way there would be a fair chance of valuable and meritorious professional work, which is now overlooked, being rewarded, and of injustice to the other officers being prevented. At present rewards to medical officers are apparently dependent, in most instances, upon the recommendation of general officers commanding; but it may be fairly assumed, without any disparagement to them, that they are scarcely fit judges of the value of professional work or of the manner in which it is done; it requires the knowledge of an expert to appreciate it at its true value. And yet it is of far more importance to the well-being of the soldier than the quasi-military duty for which, under the existing system, the rewards and decorations are bestowed. Hitherto it has been too much the practice of the military authorities to over-rule recommendations of the Director-General for the reward of professional work, and the case now under notice shows how rewards may be conferred contrary to the principles of justice and in defiance of the regulations of the service. We believe the existing system only requires to be brought under the notice of Mr. W. H. Smith to undergo a much-needed and judicious modification.

TYPHOID EPIDEMIC IN YORK.

A CONSIDERABLE epidemic of typhoid fever is prevailing in York. Towards the end of September cases of this disease rapidly augmented in number, the largest increase taking place in October. The disease was maintained throughout November, and in the three months ending Dec. 4th there had been 185 cases. Mr. North, the medical officer of health has the matter under consideration; and he has already made a number of inquiries which lead him to conclude that the epidemic is mainly due to contaminated milk. Indeed, he says that there are very few places near York from which milk can be safely distributed if typhoid fever existed on the premises. This, unfortunately, whilst explaining how the distribution of the disease has, in great part, been effected, by no means gets over the difficulty as to the origin of the infection and the process by which it got into the dairy or dairies affected; neither does milk-distribution account for more than a preponderating number of the attacks. It will be remembered that in 1884 no less than 315 people were attacked in York with typhoid fever, and

that about fifty of these, or one in six, died. The outbreak was carefully investigated and reported on both by Mr. North and Dr. Airy of the Local Government Board, and advice was given to the sanitary authority as to such matters as the strict supervision of milk-supplies, the systematic removal by the corporation of night-soil and refuse, and the ventilation and flushing of the sewers. We shall look with interest to Mr. North's forthcoming report to see what progress has been made in these matters. In 1884 both Dr. Airy and Mr. North seemed convinced that the water-supply did not cause the epidemic, although it is drawn from the Ouse at a point below which it and its tributaries receive the sewage of a number of towns and villages. And, in the present instance, Mr. North provisionally expresses the opinion that the consumption of this river water is not the cause of the epidemic. This may be so, but the arguments with which this view is backed by some persons are not altogether satisfactory. Thus it is stated that 75,000 people drink this water, and that if the supply had been in fault the epidemic would have been more extensive. We agree that the epidemic as a whole does not support the view of a single cause in the form of water. But the typhoid poison must be regarded as particulate, and its occasional presence in the river as it passes the pumping-station might produce very different results from those following on the existence of the same infection in a well. In short, such a river-supply could easily initiate an epidemic, which would afterwards be spread by milk, sewers, and privies. It is locally suggested that chemical analysis of the water should be made. We have no objection, except in so far as any judgment as to the absence of a particulate infection from a given sample of an ever-varying supply may be formed from the negative results of the chemist. Chemistry serves most valuable purposes in connexion with water analysis, especially in so far as positive results are concerned; but hitherto the chemist has failed to detect typhoid excreta even when deliberately added to the sample of water submitted to him, and it cannot be expected that he can judge of the absence of such means of infection as a cause of this long-continued epidemic from samples taken now, or even at an earlier date, from the river service.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE harmony and success of the annual meeting of the constituents of the Hospital Sunday Fund are a matter for sincere congratulation. Now, when a fierce criticism beats upon every institution, it is not to be wondered at that even hospitals for giving a temporary home to the sick, the lame, and the blind should have their critics. Many of these critics are perfectly honest in their criticism, and deserve to have their views well considered. The hospitals might add to their enormous and unequalled claims on the benevolent a yet further claim by co-operating with those who would eliminate all abuse from them, and help the development of those provident medical institutions which encourage the thrift of the people. This would tend to reserve the funds of the hospitals for cases of magnitude and misery, which in our population of four millions are still scantily provided for. One reason why the Hospital Sunday Fund enjoys the confidence of the public so much is that the Council contains many members who are deeply anxious to see hospitals do all the good they can and no harm at all, either to the poor or to the medical profession. The new members of the Council—to wit, the Rev. Prebendary Eyton, the Rev. C. J. Ridgway, the Rev. John Clifford, the Rev. J. R. Wood, the Right Hon. Earl Strafford, Sir Andrew Clark, Lionel Cohen, Esq., M.P., Alderman F. de Keyser, Richard Foster, Esq., and Thos. Wakley, Esq., F.R.C.S. Eng.—will be a further guarantee to the public that the Hospital Fund will be wisely administered. It is in the constitution of the Council and the harmony of the constituents that the best promise lies of good work and large collections. The sum raised this year (£40,399), however, is in itself a very gratifying one, being £6000 more than in 1885, and £8000 more than the average of preceding years. Finally, we may heartily congratulate the Fund on the succession of another Lord Mayor in full sympathy with the cause of hospitals and of Hospital Sunday. Sunday, June 19th, is fixed for the collection of 1887.

ALCOHOL IN DISEASE.

OUR teetotal friends have had such a set of the tide in their favour of late years that they take badly any little sign in the opposite direction. They have seen medical and physiological authorities one after another admitting that alcohol was dispensable in a large number of diseases, and that for ordinary purposes of health those fare best who take it with extreme moderation. Great physicians have taken their brandy or even their sherry in *petits verres*, and have declared the inability of people with healthy organs to appropriate more than a very small quantity. More than this is discharged as at best useless and often injurious. All casual drinking, drinking at odd times and on empty stomachs, and for the mere sake of drinking, has been denounced as treason to the finest organs of the body, and fraught for the mass of the people with future and not remote mischief and trouble. Intelligent lay people of both sexes have been quietly dropping the habit of taking much alcohol, partly from moral considerations, but largely from the report of science as to its action, and largely too from the fact that their own sensations and experience concurred with the teachings of science. All this was surely enough to satisfy temperate abstainers. But there are intemperate teetotalers, as we have always said. They will allow no virtue in alcohol. It is evil, and only evil, and that continually and in all cases. They usurp the place of the physician, and dogmatise where doctors deliberate. The true friends of temperance should disown such advocates. They do immense harm; they exclude thousands from the great army that is available against excess, and they put into an attitude of opposition the medical profession, which has enormous power to help all true social and dietetic reform. Our own attitude in this matter is well known. We take the evidence of every witness who has common sense or special knowledge, and try to weigh it. Two witnesses are before us as we write. One (Dr. Collie, medical superintendent of the Eastern Hospitals), who has been courageous in advocating good wine, in proper quantities, in those hospitals. He has defined his views in a paper in the *Practitioner*, vol. xxxvii., No. 5. He admits that alcohol is not required in the mildest cases of fevers, nor in the severe if the patient be taking a sufficiency of food, nor generally in young adults of the well-to-do classes. These are great admissions for Dr. Collie to make; but in opposite circumstances he maintains it is more or less necessary, and we advise our readers to consider his opinions. Briefly, in the chief fevers, to which his authority applies, they are as follows: In *typhus*, alcohol is rarely required for children or adults under thirty; but after this age it is required, and often in considerable quantities. It may be dispensed with early in convalescence, as solid food can be taken as soon as the temperature falls. In *scarlet fever*, alcohol is not required, as a rule, at any period of the disease. But in very poor children in early convalescence, with abscesses or brawny neck, alcohol in the form of port wine is indicated. He considers port, say four to eight ounces, good for children of the age of from four to six. For procuring sleep it is better than opium. In enteric fever the chief value of alcohol is during convalescence, where solid food

cannot safely be taken for from ten to fourteen days from the return to normal temperatures. Alcohol is contra-indicated in cases of hæmorrhage unless collapse has resulted. Burgundies and champagne of well-approved brands are, he thinks, the best forms. Let Dr. Collie's opinions be considered in their entirety, and before our teetotal friends reject them contemptuously, let them pass through six weeks of the diarrhœa and fever of typhoid. The Bishop of Manchester is the other witness. He declares that after two years' experience of total abstinence he broke down utterly. His medical man gave him the choice of giving up work or taking a *slight stimulus with his meals*. The result justified the prescription, and the Bishop, instead of being a total abstainer, is a member of the Church of England Temperance Society, discontinuing all but the measured and medical use of alcohol at meals. Those who exclude him as a fellow-worker would have excluded the Apostle Paul for his prescription to Timothy, forgetting his other great prescription to all men—to "live soberly, righteously, and godly."

THE SANITARY STATE OF WEST COWES.

WE are glad to note that the Local Board of West Cowes have engaged the services of Mr. James Lemon, M.Inst.C.E., with regard to their system of sewerage. Mr. Lemon's report fully confirms the complaints as to the serious defects in the existing system. He states that the present system drains by means of fourteen outfalls upon the foreshore at all states of the tide, the result being deposits of sewage and annoyance to the inhabitants. Then there are tide-locked sewers generating noxious gases in the streets, to the detriment of the health of those living in houses connected with them. Indeed, such culverts were only constructed to receive surface and rain water, and Mr. Lemon points out that a perfectly water-tight, self-cleansing, and well-ventilating system is needed. This is, indeed, what official and other reports have before indicated; and now that the advice comes from a skilled engineer of their own choice, it is to be hoped the Local Board will face the situation, and free their charming seaside resort from the stigma now attaching to it. Mr. Lemon enters into details as to his scheme, and he says that if the local authority will carry it out, Cowes will be rendered one of the most attractive seaside places in the south of England, and that its trade and prosperity will be greatly increased.

JUDICIAL STATISTICS OF VACCINATION.

A LETTER from Mr. William Tebb appeared in *The Times* of Monday, calling attention to the large number of persons who, during the year ending Sept. 29th, 1885, have been prosecuted in England and Wales for non-compliance with the Vaccination Acts. It refers also to the so-called house-to-house census which has been conducted by an anti-vaccination society, and quotes these returns as evidence of the large number of persons who are opposed to vaccination. Mr. Tebb urges the appointment of a Royal Commission of Inquiry, and speaks of this as an expedient now approved by the leading medical journals and by about a hundred Members of Parliament. If this record be correct, it is evidence of the extreme mischief which can be done by a small number of mistaken enthusiasts; it is no difficult matter to stir up feeling amongst the more ignorant of the population against any existing legislative measure, and especially when such law entails even a trifling inconvenience upon those who have to submit to its dictum. Dr. Buchanan, in the last report which he presented to the Local Government Board, clearly expressed the opinion of the profession with regard to the enforcement of vaccination: "To the physician who realises the powers of vaccination, and who knows the malignancy of the disease against which it protects, the notion of enforcing the acceptance of such a boon is distressful. But the distress is akin to that with which he himself has at times to force nourishment down the throat of a lunatic who is starving himself; and in the case of vaccination he sees that it is for the security of children otherwise helpless, not of the recalcitrant himself, that compulsion is wanted." With reference to a Royal Commission of Inquiry, we cannot for a moment see that it would serve any useful purpose. Vaccination is in no sense of the word on its trial; the accumulative evidence of past years points conclusively to the fact that, with an infinitesimal amount of risk, it affords protection against one of the most terrible diseases that has ever destroyed mankind. Certainly the advocates of vaccination have nothing to fear from such an inquiry, but it would entail considerable trouble and expense, and no case has been shown for its necessity; moreover, however clearly a Commission reported in its favour, the decision would have no influence upon those who decline to be convinced by the teachings of the past.

THE DENSITY OF THE TEETH AS INFLUENCED BY THE FOOD, ETC.

DR. W. D. MILLER of Berlin has recently communicated to the American Dental Society of Europe the results of his experiments upon dogs, to show the effect upon the teeth produced by the absence or presence of lime salts in the their food. Every dental surgeon knows that the hardness of the teeth may vary greatly in the same individuals at different periods; the most marked, although by no means the only cases, are those of pregnant women; and this cannot be explained solely on the ground that the secretions of the mouth are vitiated by reduced acid from gastric disturbance. There is undoubtedly an absolute softening of the whole tooth substance, due, probably, to the robbing of the teeth of the mother of their lime salts in order to build up the osseous system of the fœtus. Dr. Miller is endeavouring to show experimentally how far changes can be produced in teeth. His *modus operandi* is to extract a tooth from a healthy dog, and then to feed the animal upon food containing but little lime salts for three months; a second tooth being now removed, the food is changed to one containing an excess of salts. This is continued for four months, when a third tooth is extracted. From the results of chemical analysis, he finds that there is an appreciable loss of lime salts in the first stage, amounting in one case to more than 1 per cent., and during the second stages that the proportion of lime salts rises to normal. The number of experiments has not been sufficient to give absolutely conclusive results, and no microscopic examinations have been made. Dr. Miller himself points out that Zalesky and Hoppe-Seyler, in their similar researches, maintain that the bones are not only deficient in lime salts, but that there is an absolute rarefaction, so we should expect some similar change in the teeth. We should also like to hear of some experiments on pregnant animals.

TREATMENT OF WHOOPING-COUGH.

THE following method of disinfection of sleeping and dwelling apartments and clothes is recommended by M. Mohn in the treatment of whooping-cough. It is said to cure the cases immediately. The children are washed and clothed in clean articles of dress and removed to another part of the town. The bedroom and sitting-room or nursery are then hermetically sealed; all the bedding, playthings, and other articles that cannot be washed are exposed freely in the room, in which sulphur is burnt in the proportion of twenty-five grammes to the cubic metre of space. The room remains thus charged with sulphurous acid for five hours, and is then freely ventilated. The children return the same day, and may sleep and play in the disinfected rooms.

BACKWARD DISLOCATION OF THE FINGERS UPON THE METACARPUS.

IN an article which appeared in the *Boston Medical and Surgical Journal*, and which has been reprinted in pamphlet form, Dr. E. O. Otis discusses the above-named question. The author has taken as his text two cases of dorsal dislocation of the first finger backwards, which were unsuccessfully treated by him, but which led him to consider the subject thoughtfully and investigate the literature. The fact that such difficulty was met with in two consecutive cases led him to the opinion that the obstacles to reduction present were not such as are generally recognised. He reviews the anatomy of the joint, mentions numerous experiments which have been made by M. Farabœuf, and some by himself and others, in the majority of which the glenoid or anterior ligament of the joint ruptured at its attachment to the metacarpal bone, when the phalanx was forcibly displaced backwards, and comes to the conclusion that in the majority of cases it is this ligament which is the obstacle to reduction. If the proper procedures be employed to bring the phalanx into position again, this torn ligament is no obstacle to reduction. But if improper manipulation be used, by first flexing the phalanx and then making traction upon it, the ligament becomes completely reversed, its palmar surface resting on the metacarpal bone, and the dislocation becomes "complex" and irreducible. The author quotes largely from Jalagnier on the subject (*Archives Générales de Médecine*, Feb. 1886), and mentions the treatment to be adopted under such circumstances. Firstly, an attempt by extreme dorsal flexion to get the base of the phalanx behind the torn ligament, and thus convert the condition into that of simple dislocation. Secondly, on the failure of this, subcutaneous division of the ligament as it lies on the head of the metacarpal bone, the puncture being made to the outer side of the tendon. This latter is stated by MM. Farabœuf and Jalagnier to be both simple and absolutely efficacious. Other views as to the cause of difficulty in reducing these dislocations are mentioned, as also other methods of treatment; but Dr. Otis is inclined to look upon this as the usual cause of the difficulty in reducing these dislocations.

INSANITARY HOUSES.

A CASE of some importance to landlords and tenants has been decided during the past week in the Court of Appeal. The plaintiff let an unfurnished house to the defendant through an agent, who verbally informed the defendant that it was in good sanitary condition and fit for habitation. Subsequently the defendant alleged that he discovered that the statement as to its condition was incorrect — that the drains, water-supply, and ventilation were dangerous and defective. He therefore left the house and declined to pay the rent. At the first trial, before Mr. Justice Smith without a jury, a decision was given that the house was in an insanitary condition, that the plaintiff's agent gave the warranty upon which the defendant relied, and that the defendant left the house "within a reasonable time." Judgment for the defendant was accordingly given as to a claim for rent, and also upon a counter-claim for damages. On appeal it was argued that the law which implies a warranty of fitness for human habitation in the case of furnished houses could not be strained to apply to unfurnished houses; but for the defendant it was pleaded that the warranty was a condition of the agreement of tenancy, and that a breach of that warranty entitled the tenant to void the contract. The court found that in this case there was a warranty given by the agent, and that this was binding upon the plaintiff. The question of implied warranty was not, therefore, discussed, and the appeal was dismissed. The statement of an agent as to the condition of houses may now be held to be a warranty, which enables tenants to recover damages from landlords if any misrepresentation is made. The result of this case will be doubtless good, for it will tend to check the habit adopted by many house-agents of making inexact statements as to the condition of premises they are desirous of letting.

A NEW LOCAL ANÆSTHETIC.

DRUMINE is the title of a new Australian local anæsthetic discovered and described by Dr. John Reid of Port Germein, South Australia. Euphorbia Drummondii is the species from the milky juice of which the alkaloid drumine was prepared. Cocaine is known to have a mixed action on sensory and motor nerves, and causes preliminary excitement; whilst drumine is said to have an almost purely sensory paralysing effect, and does not cause excitement. Experiments were made on cats and on the observer's tongue. It was injected into the legs of the former animals and caused general dulness, with marked impairment apparently of all forms of sensibility. Placed on the tongue, nostrils, and hand of the observer, the resulting anæsthesia was most marked. The alkaloid has no action on the pupil, and small doses given internally produce no constitutional effect. It has been employed successfully in subcutaneous injections for sciatica and sprains. The experimentation has so far been imperfect and incomplete. We hope soon to have a fuller account of this new alkaloid, and to be able to give further information thereon. The amount injected subcutaneously was four minims of a 4 per cent. solution. Dr. Reid anticipates a brilliant future for the drug in the domain of nervous and cerebral diseases.

COCAINE IN DENTAL SURGERY.

OUR Paris Correspondent mentions in his letter in our last issue that M. Georges Vian claims to have solved the problem of local anæsthesia in dental extractions by means of the injection of one grain of cocaine hydrochlorate. Now this method has been in use for some considerable time in this country, the first published account being by Mr. Hunt of Yeovil in the *Journal of the British Dental Association* in January last, and a large number of other dental surgeons have been making experiments in the same direction. Cocaine is a most valuable adjunct to the Dental Pharmacopœia, but we think that its qualities have been somewhat exaggerated. For the production of local anæsthesia in dental cases, the solution which gives the best results is undoubtedly that made at the time by dissolving one grain of the hydrochlorate in ten minims of water; where it is kept for any length of time, even if carbolic acid, salicylic, or perchloride of mercury be added, it loses its anæsthetic properties. All are agreed that painting the gums with a solution, of no matter what strength, is useless, for the gums, unlike the conjunctiva, do not absorb it, and also the mucus which coats them forms an efficient barrier. The results of injecting cocaine have not been by any means uniformly successful, and even its warmest advocates admit that patients often say that they experience some pain, though not so much as when no anæsthetic has been used. Its disadvantages are many. The prick of the needle (which, however, may be masked by painting the gum first with a solution of cocaine), the mental suspense of waiting from three to five minutes, and the consciousness of the operation being performed, are all attended with pain; but there is a much more serious aspect—the after-consequences. There are reported a large number of cases of syncope lasting for from ten minutes to an hour after its use. We know of no case where the "cocaine habit" has been formed after its

use in dental cases. In judging of the value of all local anæsthetics, the effect of imagination has to be eliminated; and we know of more than one case where patients have been told that they would feel no pain, and only water has been injected, yet they declared they felt nothing. In cases where the administration of nitrous oxide gas is objected to by the patient, or for other reasons not admissible, the injection of cocaine may be resorted to with advantage; but we do not think that it can ever compete with the gas. Apart from extractions, its use in dental surgery is manifold and great, in the treatment of exposed pulps, applications of the rubber dam where the gums are tender, lancing abscesses, and in many other circumstances.

THE NEW EXAMINATION BUILDINGS.

THE New Examination Hall on the Thames Embankment is rapidly nearing completion, and the question as to the uses to which the vacant plot of land not required for the building should be applied must soon be determined by the authorities of the combined Colleges. If pecuniary reasons are not urgent (and, considering the large incomes now derived by the two Colleges from their examinations, we should not suppose they could be), we would recommend that it should be left as it is, and should not be built on until the requirements of the examining board have been fully tested by one or two years' experience. It will then be time enough to decide whether class-rooms and laboratories for elementary or advanced scientific teaching and work could be added with the greater advantage. If, as is rumoured, there is a great divergence of opinion on this point, there is the more reason for delay, and for not taking any definite step which cannot be subsequently retraced if such a course should then seem expedient.

THE PROGRESS OF CHOLERA.

CHOLERA has again shown signs of activity, and its progress is further in the direction of eastern Europe. Several deaths from this disease are stated to have occurred in a village in the vicinity of Tirnova, in Bulgaria, the infection being alleged to have resulted from the importation of some clothing belonging to a man who had died of cholera in Hungary, where there have already been 966 cases and 499 deaths. The disease still lingers in certain parts of Hungary and Galicia, and if we have a recurrence of the epidemic next year, it is by no means improbable that it may take its start from some of the localities more recently infected in the Austro-Hungarian Empire. The east of Europe is probably much less prepared to withstand its progress than was the west.

CIRCULATION IN GANGLION CELLS.

PROFESSOR ADAMKIEWICZ of Cracow has recently published some observations on the circulation in ganglion cells, which, if confirmed, certainly adds to our knowledge of the physiology of nervous tissue. The ganglia chosen for observation were the intervertebral ganglia connected with the cords forming the brachial plexus. Carmine injections were made by means of the spinal arteries, and examination showed that each cell has a special arterial twig, which is distended so that its walls surround the ganglion cell, which consequently is situated in the lumen of the vessel, and is bathed completely by the arterial stream somewhat in the same way as the placental tufts are bathed by the blood in the maternal sinuses. This, however, is not all; for the cell itself contains a number of exceedingly minute vessels or passages from the circumference to the centre, which of course admit serum only; and this, which enters the cell in an arterial condition through numberless peripheral orifices, is collected at its centre as venous serum—forming, indeed, what has hitherto been looked upon as the cell nucleus,—which therefore, instead of being solid, is liquid, or rather a cell containing liquid, the only solid part being the nucleolus. This venous serum is conveyed away by a single vessel or vein which runs into the general venous circulation. Besides all this, it appears that the whole bloodvessel apparatus of the ganglion cell is surrounded by special lymph vessels, so that the arrangement is highly complicated, and offers an interesting field for further research.

THE EDUCATION AND REGISTRATION OF ARCHITECTS.

IN a paper read before the Society of Architects on the 14th inst. by one of the Vice-Presidents, Mr. D. Howard Seth-Smith, is to be found the first outline publicly announced of the Bill which is proposed for "closing" the architectural profession—a step of great importance in many ways to the whole country, but especially from the standpoint of health. The leading provisions of the proposed Bill are (1) the establishment of a Council similar in objects and duties to the General Medical Council; (2) the payment of fees for registration, which are to go to defray the expenses of carrying the Act into execution; and (3) the regulation of qualifications for registration. At the present time, in the eye of the law everyone has an equal right to practise as an architect, and consequently every man who has fairly entered on practice has a right to a place on the register. Immediately, however, the Act comes into force the compulsory education of the entire profession will commence, and imperfectly qualified men will be stimulated to self-improvement by increasing competition, and will be gradually supplanted by a race of cultivated practitioners. The plumbers are registering themselves as competent under a severe test, and intend to apply for an Act of Parliament to render that test compulsory; and although it would perhaps have been more fitting for the architects to have led the way in such a step, that fact does not prevent us from congratulating them upon so promptly following the good example set them.

FARTHING DINNERS.

THE cheap dinner movement appears to have reached its climax in Birmingham, where a bowl of soup sufficient to satisfy some appetites at least, and capable of producing an evident nutritive result, is sold to poor school-children at the cost of one farthing. Full details respecting this new departure in dietetics are to be found in an interesting and practical paper on the subject by Mr. G. H. Sargant. The fact that any measure of real success can attend an outlay so trifling is significant. It amounts to proof, which ought to be convincing, that there are in this system principles and methods in diet which have long lacked application, but are most happily adapted to meet the requirements of almost any depth of poverty, in some degree at least. In looking through the history of the farthing dinner three noteworthy points present themselves. It is evident, in the first place, that a successful result depends greatly on the number of diners; 400 or 500 are more easily fed at this cost than 100. Secondly, it is not without reason taken as an axiom that the digestive function, like every other, is depressed by hunger, and that therefore the fittest food for a child in this condition consists of light vegetable or mixed diet well diluted with water to form a soup. In the third place, the highly nitrogenous leguminous products, such as peas and lentils, even when used as a scanty thickening for hot water, are shown to have a nutrient value which is distinctly recognisable. Look at the matter as we may, we cannot, of course, pretend that children thus nourished are well fed, but there is sound theory as well as good practice

in the system, and when the wolf of hunger is at so many doors every form of succour is welcome. Those who, like ourselves, are interested in this question of the time will do well to read Mr. Sargant's paper, which abounds in shrewd and experimental suggestions.

PROPOSED TESTIMONIAL TO DR. ARCHIBALD H. JACOB.

IT has been suggested by many medical practitioners residing in Dublin, as well as in various parts of the country, that the present is a fitting time for the members of the medical profession throughout Ireland, and especially those holding public appointments, to present to Dr. Jacob a testimonial as a recognition of the esteem in which he is personally held, as well as of the important services he has for the past twenty years rendered for their benefit. As an active member of the Irish Medical Association, Dr. Jacob has devoted much valuable time and energy to matters affecting the interests of the medical profession. His recent candidature for the office of direct representative has, moreover, entailed a considerable expenditure on his part. It has been arranged that a preliminary meeting of Dr. Jacob's friends shall be held to-day (Saturday), at the Royal College of Surgeons, Dublin, when the arrangements best calculated to promote the success of the proposal will be discussed.

CONTAGION OF TETANUS?

AT the Société de Chirurgie an interesting paper, followed by discussion, was read by M. Larger, which seemed to show clearly that there were good grounds for believing in the contagiousness of tetanus. Four patients who had been treated in the Colmar Hospital were seized with tetanus at different intervals, and all died. The nature and severity of the wounds varied in each case from an amputation to a simple incised wound. The only thing common to them all was that the cases had all occupied contiguous beds. Tetanus is rare at Colmar. None of the patients had had anything to do with horses. A veterinary surgeon, M. Cagnat, had practised castration on horses for twenty-five years without a single case of tetanus. At the end of 1884 he removed with an écraseur a tumour of the testicle in a horse; the animal died of tetanus. Operations for castration practised with the same écraseur on five horses afterwards were followed by tetanus and death in all the animals. The écraseur was then submitted to disinfection by being heated to a high temperature. The instrument was afterwards used for fresh castrations, and without tetanus resulting in any of the animals operated on.

PANTOMIME CHILDREN.

CERTAIN abuses connected with the employment of young children in pantomimes have lately attracted public attention. At a meeting of the London School Board held last week the subject was examined at considerable length by various speakers, in its moral, intellectual, and physical aspects. We cannot now discuss exhaustively each of these considerations. If, however, we may rely upon the evidence of quoted cases which seem to have satisfied the Board, there is reason to believe that the allegations which have been brought against the present system of theatrical management in this particular are not unfounded. Instances are given in which children under ten years of age were employed in pantomime performances, in which the work of rehearsal has interfered with school attendance; and illness, as we may well believe, has been traceable to the late nightly exhibitions carried on for a length of time by such young children, who afterwards have had to walk in any kind of weather, indifferently clad, to homes at the best not very comfortable. Without assuming any censorship of the pantomime as a social custom, we may remind our readers that such abuses, when they exist under the veil of public service, must not be excused by their intention or suffered to continue when they can be removed. This being the case, it clearly behoves managers of theatres and other interested persons either to amend the evils complained of or to disprove their existence.

OPPOSING AUTHORITIES.

ON Monday a conference of Metropolitan Poor-law guardians was held at the offices of the City of London Union to discuss the proposal of the Asylums Board to expend £84,000 in the erection of a permanent hospital at Darenth. A resolution was passed expressing surprise that the managers had again proposed to erect permanent buildings, and a further resolution that the Local Government Board be again asked to receive a deputation on the subject. These proceedings are interesting for the reason that the guardians of the metropolis have, on the one hand, elected representatives who have determined to spend money in a particular way, and, on the other, have appointed certain delegates to prevent such expenditure. If it were intended that the members of the Metropolitan Asylums Board should represent the views of boards of guardians, it is perfectly clear that their election should take place annually. Whether any satisfactory work would be carried on under these circumstances may be a matter for question. But if this intention did not exist, the actions of the boards of guardians in appointing delegates for the purposes of opposition is to be deprecated. It has become too much the custom for different authorities to attempt to interfere with each other's work, and this constant friction between the various boards is distinctly prejudicial to the public interest. There is, we fear, no probability of any diminution in this custom until the constitution of the several authorities is altered, and they are brought into more intimate relation with each other.

NEW METHOD OF EMPLOYING ELECTRICITY IN NEURALGIA.

DR. ADAMKIEWICZ describes in the Polish journal *Przeląd lekarski* an exceedingly effective way of applying electricity for the relief of neuralgia of various kinds. The apparatus he uses is a constant current battery, the cathode being a concave metal plate lined with electrical carbon, which is saturated with chloroform. This is then applied over the painful spot, and a current, weak at first but gradually increasing in strength, passed. One or two applications of this kind were found, says the author, sufficient entirely to relieve the severest cases.

PRESCRIBING CHEMISTS.

MR. MORTON-YORK, the city coroner of Gloucester, lately held an inquest on a poor woman who had been recently confined. Her only obstetric attention was from a kindly neighbour, Mrs. Etheridge. The child was born before she arrived. The mother did very well for a day or two; then she seems to have suffered from emphysema and weak heart, ascertained post mortem by Dr. Peacock. She refused to have a medical man, as her husband wished, and the only medicine she had was a draught prescribed by a chemist. The chemist acted quite straightforwardly, but the coroner very properly explained the state of the law under the Apothecaries Act. Under this Act, he said, it was the province of medical men, and medical men only, to prescribe. We commend this case and the view of the coroner to chemists. Surely, the case of a lying-in woman is too

serious a matter to be dealt with by a prescription from a chemist. It is to be regretted, too, that the husband did not disregard the wife's feeling and bring a medical man. Dr. Peacock thought the death due to failure of the heart's action, arising from diseased lung and enfeebled heart and recent delivery, and that even under medical care the result could scarcely have been different. But clearly such a case would have stood a better chance had a medical man been in attendance to direct the administration of suitable food and medicine.

PRACTICE IN RUSSIA BY GERMANS.

SOME discussion has been going on in the German and Russian journals about the possibility of German doctors practising in Russian Poland, it having been affirmed in a Berlin medical journal that a mere formal examination at Dorpat only was required, together with a knowledge of the Russian alphabet and the ability to sign one's name in Russian characters! This, however, is declared by the *St. Petersburger Medicinische Wochenschrift* to be quite a mistake, the Dorpat examinations being very thorough, and it being necessary to remain there under the professor's eyes for a considerable period. It is intimated, too, that the theoretical examinations are even more stringent in Russia than the German Staatsexamen. The University of Dorpat is the only one in Russia where the German language is used. It is, besides, the only one where the M.D. degree can be taken at the time of qualification, all others requiring a year at least to elapse between the qualifying State examination and the higher examination for this degree.

THE EAST MIDDLESEX CORONERSHIP.

THE declaration of the result of the polling which took place in East Middlesex on the 13th inst. for a coroner in the place of Sir John Humphreys, deceased, was made on the 15th inst. The numbers were announced as follows:—Mr. Wynne E. Baxter, 1458; Dr. Macdonald, M.P., 1106; Mr. T. Beard, 254; Mr. G. H. Young, 727; and Dr. Porter, 55. The successful candidate proposed a vote of thanks to the returning officer, which was seconded by Mr. Beard and supported by Dr. Macdonald, who stated that he had that day made arrangements for bringing in a Bill making election of a coroner similar to that for a member of Parliament, in consequence of the disgraceful scenes he had witnessed on the polling day.

BOOKS FOR HOSPITALS.

THE Rev. Henry Constable has issued an appeal for periodicals or other literature of a light and wholesome character on behalf of the patients in Victoria Park Chest Hospital. His request will, we hope, be answered by a wide and generous contribution. Everyone can understand the value of such gifts to the sick poor. Debarred by illness from active exercise, and confined in-doors by our uncertain weather, they are still in a great many cases capable of enjoying such quieter intellectual diversions as they safely may. The conversation of fellow-sufferers, each eloquent perhaps on his own complaint, or the consolatory visits of friends, are not sufficient for minds which need all the encouragement they can find to make them happy. In-door amusements are not very numerous, and most of them tend to lose interest by repetition. Of books it may be said that they are unusually free from this disqualification. Their great variety of subject and frequent excellence of illustration render them the almost indispensable companions of the sick at any age. Much depends, however, on the choice of books. There is little reason to fear that works of a serious character will not find their way to a hospital. We would not advocate their exclusion, or even that of studious volumes of a purely secular kind; but the books which will undoubtedly be most useful and by far most eagerly sought after are those which, though sound in tone, are not deep in any way, but light and cheerful in theme and treatment. We need hardly add that other hospitals besides that at Victoria Park are equally in need of these Christmas contributions, and that what is sent should be prepaid.

ITALY AND HYGIENE.

ITALY seems resolved to be no longer behind Europe in sanitary investigation and practice. In view of the International Hygienic Congress to be held at Vienna in the September of 1887, she is already bestirring herself so as to take a prominent and effective part in its proceedings. Through the President of her Royal Society of Hygiene, she is urgently appealing to all Italians engaged, directly or indirectly, on that subject to assemble in force at the Congress, and by their contributions to its discussions, written or oral, to demonstrate the advance she has made in hygienic and demographic science. The President published last year a volume entitled "Les Institutions Sanitaires en Italie," and for 1887 he will issue a sequel to it, showing what Italy has done in practical hygiene from 1882 to that year. Appended to this volume will be a *catalogue raisonné* of all Italian literature on the science which has seen the light between 1881 and 1887; and, to make it as complete as possible, the President invites every compatriot author of a sanitary treatise, memoir, or article to send him a full note of the same. The bibliography of Italy on pellagra, malaria, and cholera is extensive enough, and ought to contain much that is of interest to the hygienists of all countries.

THE CONJOINT SCHEME.

THE Apothecaries' Society have asked from their licentiates an expression of approval of the steps which they propose to take to enable the Society to combine with some other corporation, or to become an independent examining body. No doubt this approval will be readily accorded, and it may be regarded as an indication of a conscientious desire of the Society to obtain the fullest information of the licentiates' wishes, and to give them some share in shaping the policy of the Court of Assistants.

SACCHARINE.

SACCHARINE, which has recently been introduced into therapeutics as an excessively sweet material, three hundred times sweeter than glucose, is likely to prove of considerable service. According to Aducco and Mosso it has very high antifermentative and antiseptic properties. It is recommended for internal administration to diabetics, with a view to rendering their food more palatable. It passes unchanged through the organism, and may be detected in the urine in its original condition. In cases of indigestion or where the intestines are the seat of abnormal fermentations and acidity, it is extolled as an antiseptic.

EFFECTS OF PETROLEUM ON HEALTH.

DR. BIELCZYK publishes in a Polish medical journal the result of his experiences among the workers in petroleum wells. Very violent mental symptoms are produced by acute poisoning by the gaseous exhalations existing in the shafts of the wells, amounting to delirium of a maniacal character. These, however, always quickly cease when the patient is brought up to the earth's surface. Speaking generally, the mortality amongst the workmen is not particularly high; they seem to be remarkably free from

diseases of the respiratory organs, both of an inflammatory and a tubercular character, and also from infectious diseases. They are, however, subject to an eruption, like acne, affecting the extremities. Dr. Bielczyk mentions that he has found raw petroleum an excellent application for fresh as well as for old and foul or torpid wounds.

THE MEETING OF THE MEDICAL COUNCIL.

THE General Medical Council is expected to meet on Tuesday, the 15th of February next, at 2 P.M.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. Carl Friedländer, Privat Docent in Pathological Histology, has been granted the title of Professor.

Erlangen.—The number of medical students is now 260, against 233 last winter. A course of dental surgery is now being given to medical students for the first time.

Königsberg.—The nominees for the Professorship of Surgery vacated by Professor Schönborn, who has gone to Würzburg, are Professor Madelung of Rostock, and Professor Mikulicz of Cracow.

Würzburg.—Dr. Kirchener has been appointed to the charge of the Otological clinic.

Tubingen.—Dr. v. Rapp, a former professor, who became a homœopath and was latterly private physician to the Queen of Würtemburg, has just died at Stuttgart.

WE regret to record the death, on the 8th inst., at Ryton-on-Tyne, of Dr. Walter Fergus, until recently resident medical officer at Marlborough College, a post which he had occupied for thirty-seven years. It will be remembered that on his retirement the Council of Marlborough College marked their high sense of Dr. Fergus's services by the grant of a handsome life pension and the placing of his portrait in the College hall, while old Marlburians added a purse of £500, and present Marlburians a silver tea-service. From his long and arduous work at Marlborough Dr. Fergus had recently suffered in health, and his last illness was sudden and brief. The funeral took place at Marlborough on the 14th inst.

THE directors of the Istituto Antirabico (the Anti-rabies Institute) of Milan announce that their bacteriological studies have enabled them actually to diagnose in the dog-bitten the presence of the poison of rabies, and to apply the Pasteur method of cure, with results superior to those hitherto attained by Pasteur himself. They are about to publish a statistical report of the first 500 cases that have come under treatment.

FROM Turin the death is announced of the eminent surgeon, Fedele Margary, known far beyond the circuit of that city for his brilliant operations in its Ospedale di San Giovanni. At his funeral an *éloge* of him was pronounced by the senator, Dr. Bruno, who dwelt on his skill as an operator and his success as a teacher.

THE *Rangoon Gazette* states that General Sir Frederick Roberts, the Commander-in-Chief in India, inspected the European and Native Base Hospitals at Rangoon *en route* to Upper Burmah, and expressed himself well satisfied with the arrangements made there for the care and treatment of the sick and wounded.

A SERIOUS epidemic of diphtheria is reported to have broken out at Ash, near Sandwich, Kent. The village schools have been closed, and every effort is being made by the district authorities to subdue the epidemic.

ON the 13th inst. the death of Dr. Ebenezer Watson occurred at his residence in Glasgow, the result of what he himself regarded as malarial poisoning, contracted at a country house in the early months of 1885. Dr. Watson took a great interest in medical legislation, and his death will be a great loss to the various medical institutions and societies with which he was connected. We purpose publishing a more detailed account of his career in our next issue.

MR. J. W. SCARTH, a Leeds surgeon, was on the 14th inst. fined seven guineas and costs by the stipendiary magistrate for having given a certificate of the death of a child which, it was alleged, he had never visited, but for which he had prescribed, on his son, who had attended the patient, telling him the nature of the illness.

IT is announced that an unexpectedly favourable change has taken place in the condition of Professor von Arlt, the veteran Vienna ophthalmologist, and that an eminent firm of instrument makers have received an order for an artificial leg to replace the limb which was amputated for gangrene.

THE Vienna professorial body, having been asked by the Minister of Education whether it would not be well to place a limit on the number of students of medicine received, has unanimously pronounced against the adoption of any rule of this kind.

THE Wolverhampton Board of Guardians, in appointing a new medical officer, have decided to make all extra fees inclusive of salary. This practice is stated to be followed by the whole of the other unions in Staffordshire.

DEGREES FOR LONDON MEDICAL STUDENTS: REPORT OF THE DELEGATES.

THE following report, dated Dec. 6th, 1886, of the Committee of Delegates, appointed by the Royal College of Physicians of London and the Royal College of Surgeons of England, to consider the question of the desirability and practicability of granting degrees in medicine and surgery to persons who have passed the conjoint examinations of the two Colleges, was presented at the special meetings summoned for the 16th inst.

On July 7th, 1885, a preliminary report to the two Colleges was adopted by the Committee of Delegates, expressive of their opinion that it was both desirable and practicable that persons examined by the two Colleges, acting conjointly, should, in virtue of that examination, have a degree in medicine and surgery conferred upon them. That preliminary report was referred by the Royal College of Physicians to their Council, and by the Council of the Royal College of Surgeons to a Committee, to consider the same and to report thereon to the respective Colleges; and the Council of the College of Physicians and the Committee of the College of Surgeons having duly reported thereon, the two reports were referred to the Committee of Delegates.

The two reports having been duly considered, the Committee of Delegates have now to recommend to the two Colleges the approval and adoption of the following resolutions—viz.:

1. That candidates who have passed the examinations of the examining board in England for the licence of the Royal College of Physicians of London and the diploma of member of the Royal College of Surgeons of England should have a degree in medicine and surgery conferred upon them, provided that they have passed such examination in arts and science as may hereafter be defined; and have pursued clinical studies in London—or in other medical school or schools if the governing body should so determine—for at least two years after having passed the second professional examination.

2. That an application be made to the Crown by the

Royal College of Physicians of London and the Royal College of Surgeons of England, acting conjointly, for power to confer degrees in medicine and surgery.

The Committee of Delegates have further to recommend to the two Colleges the approval and adoption of the following statement, setting forth the reasons for granting to the Colleges, acting conjointly, the power of conferring degrees in medicine and surgery—viz.:

I. It is a reasonable demand that London students should be able to obtain medical degrees in London, provided that their course of study, their opportunities for practical instruction, and the examinations to which they are subjected are commensurate with those which prevail in the majority of the universities of the United Kingdom.

II. The natural way of meeting this demand would seem to be that the Royal College of Physicians of London and the Royal College of Surgeons of England, acting conjointly, should acquire the power of conferring medical degrees, so that they and the schools associated with them should become *de jure*, as they already are *de facto*, a medical university.

III. The essentials of a university as regards teaching and the means of study in medicine exist in London more fully than anywhere else in England—viz.: (*a*) The teachers in London include men of the highest eminence in the several branches of medicine. (*b*) London possesses unrivalled clinical advantages for medical education in its large and well-appointed general hospitals, containing upwards of 5000 beds, occupied by about 60,000 patients a year, with out-patient departments attended by not less than 350,000 persons; its special hospitals, with more than 3000 beds; and its lunatic asylums with upwards of 5000 beds. (*c*) What has been stated of the advantages for clinical teaching applies in an equal degree to the study of morbid anatomy and pathology. (*d*) As regards the teaching of the preliminary subjects of medical study, advantages equal to those of universities exist in the London medical schools. (*e*) The organisation of the London medical schools, and the intercourse of the students with one another and with their teachers, constitute a further condition of university life, which has a marked and important educational influence.

IV. The examinations of the Colleges in the subjects of study comprised in their curriculum are on a level with those of the majority of the universities of the United Kingdom.

V. Whilst the essential conditions of university education in medicine exist in London, it would lead to their fuller and more complete development, and to the encouragement of higher education, if degrees—which are the recognised proof of the completion of a university course—were conferred upon the students who have virtually passed through such a course.

VI. It is contrary to the interest of the public that students should be induced to go from London to places where the opportunities for clinical studies are necessarily far inferior, merely because university degrees can there be obtained.

VII. There seems to be no just ground for objecting to the creation of a new university, seeing that a university has just been founded—which confers a power, such as that now claimed for London, on Manchester and Liverpool. Other possible objections may be made and answered as follows—viz.:

It may be objected—(*a*) That there would be two universities in one city. The case of Dublin may be cited which has its two universities. (*b*) Or that the new university would consist of one faculty only. Precedents may be found—notably in the case of Montpellier—in which a university originally consisted of a medical faculty only; and in the universities of the United Kingdom, in which, at their foundation, rarely more than two faculties were included. (*c*) Or that other medical corporations would seek similar powers. In other cities in which medical corporations exist, local universities are already established, affording means of graduation such as are not available for the great majority of students in London. (*d*) Or that it would be difficult to find an appropriate title for the new university. The new university would naturally receive a distinctive designation—for example, University of Westminster.

VIII. It may be said that the students educated in London can obtain degrees from the University of London, but, for reasons into which it is not here necessary to enter, the University of London does not supply the present want, as is obvious from the following fact: of 16,192 medical men practising in England, 5219 possess M.D. or M.B. degrees; but of these, only 622 derive their titles from the University of London.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following is a copy of the circular sent to every Fellow of the College:—

SIR,—You are doubtless aware that by the Charter of the College, dated the 14th of September, 1843, "a new class of Members" was created "to be called Fellows," and in that Charter it was provided that none but Fellows should thenceforth become members of the Council, and that the right of election of members of the Council should vest in the Fellows alone.

The Council having decided to seek alterations in the Charters to enable Fellows to vote by voting-papers, without personal attendance, at the election of the Council, and to effect other changes therein, an application has been addressed to the Council by some Members of the College requesting the Council to seek further alterations in the Charters so as to enable Members to take part in the election of the Council and to be themselves eligible for seats on the Council.

The Council will be glad if you will answer the questions printed on the fly-leaf of this circular, appending thereto your signature and address, which will be treated as confidential, and return the same to me, not later than Friday, the 31st inst., in the enclosed stamped envelope.

I am, Sir, your obedient servant,
EDWARD TRIMMER, Secretary.

Lincoln's-inn-fields, W.C., Dec. 9th, 1886.

Circular to Fellows.

	Answer.
(*a*) In your opinion should Members of the College be allowed to vote for Fellows as members of the Council?	
(*b*) In your opinion should Members of the College be eligible for seats on the Council?	

Signature of Fellow _____

Address _____

To Edward Trimmer, Esq., Secretary, Royal College of Surgeons of England, Lincoln's-inn-fields, W.C.

ADDRESS BY PROFESSOR BOTKIN ON THE CIRCUMSTANCES ATTENDING THE SUICIDE OF THE LATE PROFESSOR KOLOMNIN.

THE following is an outline of an address delivered by Professor Botkin at a meeting of the St. Petersburg Society of Russian Medical Practitioners, held in honour of the memory of the late Professor Pirogoff, at which the deceased Professor Kolomnin himself was to have delivered the address.

On the 11th (23rd) of November, at 12 o'clock, Professor Sergei Petrovich Kolomnin terminated an irreproachable career by a shot in the right temple. The deceased left the following letter addressed to the Senate of the (Military Medical) Academy:—"Last week people's minds seemed to have become clouded over on account of the disastrous result of an operation. I am not to blame. I wished to do what was right. I desire that Dr. Morozoff and others may not be considered to blame.—S. KOLOMNIN." On the 6th (18th) of November the operation which ended so unfortunately was performed. Five days later S. P. Kolomnin was no more. All who knew Sergei Petrovich as a man humane in the highest degree, holding, too, a foremost place in the ranks of science, found it impossible to believe that he could have committed an error so grave as to call for such severe self-condemnation. Scientific men and the public were shocked by the occurrence, and different views were expressed concerning it. While some looked upon it as a heroic action others stigmatised it as cowardice. Having known Sergei Petrovich for more than ten years as a colleague in the Academy and as the best adviser on surgical matters, being also well acquainted with his character, it is gratifying to me to be able to throw some light on the case, the more so as he came to me in the clinic on

Nov. 10th (22nd) and asked me to supply his place at the present "Pirogoff meeting" of the Society, at which he had to deliver an address, but did not feel sufficiently well after his misfortune to fulfil his engagement. On Oct. 27th (Nov. 8th) a female patient, aged twenty-three, was seen in my out-patient department by Dr. Pokrovski, ordinator (chief assistant) in my clinic. He diagnosed an affection of the rectum, and sent her into the surgical clinic, where Sergei Petrovich (Kolomnin) examined her, finding an ulcer as large as half the palm of the hand, of a tuberculous character, as he believed, this view being upheld by the presence of some tumours. He decided to scrape and subsequently to cauterise the lesion. In order to produce anæsthesia he had fifty grammes of a 5 per cent. solution of hydrochlorate of cocaine prepared; of this thirty grammes were brought into use, containing exactly twenty-four Russian grains of the salt, or twenty-three English grains [the Russian grain is exactly one-sixteenth of a gramme], six grains being injected at a time into the rectum. After the third of these injections it was found on examination that the part was still sensitive. A speculum was then introduced, the ulcer dabbed with a dry sponge, and then the fourth injection given, making twenty-four grains in all. After this the parts were tolerably anæsthetic. The ulcer was scraped, and a tampon saturated with oil inserted. The pulse was then accelerated. During the operation the patient groaned, so that even the twenty-four grains had not produced complete anæsthesia. After the operation Sergei Petrovich (Kolomnin) went round his ward, and in three-quarters of an hour a message was sent to him that the patient was very low. He found the pulse very weak, the face and hands cyanotic, and the respiration laboured. He considered that she was in a toxic state, and used every means to bring her round, Prof. Sushchinski being also invited to a consultation. Faradisation, artificial respiration, hypodermic injection of ether, administration of ammonia, tracheotomy for the inhalation of oxygen, stimulating and nutrient enemata—all were tried, but without success. Sergei Petrovich (Kolomnin) had no doubt that death was due to cocaine. To what extent was he to be blamed for introducing so large a dose as twenty-four grains into the body? Some time before the operation he asked Professor Sushchinski about the dose of cocaine, and he told him that he considered two grains as the maximum. He however collected a number of special papers on the subject in which some thirty cases of cocaine anæsthesia were reported where from six to eighty, and even ninety grains had been administered. Most of them were cases of lithotripsy. Of course he knew that the bladder, when healthy, cannot absorb such a quantity of cocaine, but some cases of diseased bladder were mentioned where there must have been absorption. Finally, Dieulafoy had performed an operation similar to Kolomnin's, introducing into the rectum forty-eight grains all at once with complete success, and this served as a guide. He, however, observed additional precautions, employing only half the quantity and introducing it in divided doses. How far was he to blame? He certainly put too much faith in Dieulafoy's case, but anyone else might have done the same.....It is difficult to account for the French surgeon's success. It is indeed possible that, as his operation was performed at a time when cocaine was dearer than gold itself, being two shillings a grain, it may have been adulterated, and therefore the proper effect was not produced. At all events, whatever blame is due to Sergei Petrovich is greatly lessened by the records in medical literature. He himself, besides, said that he was not to blame regarding the operation, but only with reference to his therapeutics. "I blame myself," he said, "most of all for making an incorrect diagnosis; the diagnosis of tubercle was not confirmed. I ought not to have operated at all, and the patient would have been still living. In spite of my not being to blame, I cannot help feeling at times that I killed her."

Gentlemen, you know that diagnosis during life is always only a hypothesis of a more or less correct nature. There may always be a mistake, and only a serious blunder is inexcusable. In the present case the ulcer was scraped and cleaned, and it was impossible to show during life that it was not tuberculous. But even if the diagnosis had been incorrect, why did he blame himself so seriously and then punish himself in such a way? As the circumstances do not supply a sufficient answer to this question, we must look for it in the condition of Sergei Petrovich himself. He was a remarkably reserved man, confining himself entirely to his scientific work, so that he made no intimate friends. Whether it was from his personal condition or from surrounding circumstances, his character grew year by year more reserved, and for the last few years he lived quite in seclusion. He was very strict, both with other people and with himself. He was highly sensitive, and no doubt had a pathological nervous system. He had consulted me for palpitation and sleeplessness. When I saw him after the vacation he was restless and irritable. He was constantly alone and showed great tendency to impatience, and after the unfortunate occurrence his equilibrium seemed to be quite upset. On the Sunday he attended the post-mortem examination, expecting to find some disease of the internal organs. None, however, was discovered, and he satisfied himself that the cocaine must have been the cause of death. On the Monday he came to me in a very depressed condition, with a pile of reports of cases of cocaine anæsthesia. I begged him not to lay this case so much to heart, and after a time he became more composed, and promised to come to this meeting and explain the whole of the circumstances to the Society, but he added, "I can't promise for certain." He was repeatedly moved to tears when talking over the case..... Taking into consideration all these things, we must conclude that when he committed suicide he was not fully responsible for his actions. Indeed, I think that I myself, and all of us, are really to blame for his death, because in the time of his dire distress we did not sufficiently hold out the hand of sympathy to him.

The meeting broke up in solemn silence.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5553 births and 3984 deaths were registered during the week ending Dec. 11th. The annual death-rate in these towns, which had been 19·1, 20·1, and 21·0 per 1000 in the preceding three weeks, further rose last week to 22·9. During the first ten weeks of the current quarter the death-rate in these towns averaged 19·7 per 1000, and was 2·1 below the mean rate in the corresponding periods of the ten years 1876-85. The lowest rates in these towns last week were 12·1 in Brighton, 17·0 in Birkenhead, 17·7 in Hull, and 18·0 in Birmingham. The rates in the other towns ranged upwards to 29·2 in Manchester, 30·1 in Derby, 30·5 in Blackburn, and 33·3 in Wolverhampton. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 399 and 379 in the preceding two weeks, rose again last week to 424; they included 181 from measles, 65 from scarlet fever, 60 from whooping-cough, 50 from "fever" (principally enteric), 35 from diarrhœa, 32 from diphtheria, and 1 from small-pox. The lowest death-rates from these zymotic diseases last week were registered in Bolton and Birkenhead, and the highest rates in Halifax, Leeds, and Wolverhampton. The greatest mortality from measles occurred in Huddersfield, Leeds, Halifax, and Wolverhampton; from whooping-cough in Bristol and Huddersfield; from scarlet fever, in Leicester, Salford, and Bristol; and from "fever," in Preston and Salford. The 32 deaths from diphtheria in the twenty-eight towns included 14 in London, 7 in Liverpool, 3 in Portsmouth, and 2 in Huddersfield. Small-pox caused no death in London and its outer ring, 1 in Leeds, and not one in any of the twenty-six other large provincial towns. Only 2 cases of small-pox were under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding five weeks from 293 to 444, further rose last week to 494, and exceeded the corrected weekly average by 25. The causes of 97, or 2·4 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Newcastle-upon-Tyne, Nottingham, Cardiff, Birkenhead, and Plymouth. The largest proportions of uncertified deaths were registered in Halifax, Oldham, Sheffield, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·4 and 23·1 per 1000 in the preceding two

weeks, declined again to 22·0 in the week ending Dec. 11th; this rate was 0·9 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 14·8 and 17·0 in Leith and Edinburgh, to 22·8 in Dundee and 26·8 in Glasgow. The 544 deaths in the eight towns last week showed a decline of 26 from the number in the previous week, and included 17 which were referred to scarlet fever, 15 to whooping-cough, 15 to diarrhœa, 6 to diphtheria, 5 to measles, 5 to "fever" (typhus, enteric, or simple), and not one to small-pox; in all, 63 deaths resulted from these principal zymotic diseases, against 64 and 81 in the preceding two weeks. These 63 deaths were equal to an annual rate of 2·6 per 1000, which exceeded by 0·2 the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of scarlet fever, which had been 14 and 25 in the previous two weeks, declined again last week to 17, of which 12 occurred in Glasgow and 3 in Edinburgh. The 15 deaths from whooping-cough also showed a decline from the numbers in recent weeks, and included 9 in Glasgow and 4 in Edinburgh. The deaths attributed to diarrhœa, which had declined in the seven preceding weeks from 46 to 17, further fell last week to 15; 7 were returned in Glasgow, 4 in Aberdeen, and 3 in Dundee. The 5 deaths referred to "fever" (of which 2 occurred in Glasgow) showed an increase of 2 upon the low number in the previous week; whereas the fatal cases, both of diphtheria and measles, had declined. Four of the 5 deaths from measles occurred in Glasgow; and 2 deaths from diphtheria were returned both in Glasgow and Dundee. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 125 and 142 in the preceding two weeks, further rose last week to 144, but were 34 below the number in the corresponding week of last year. The causes of 59, or nearly 11 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had increased in the preceding four weeks from 23·6 to 28·1, further rose to 35·6 in the week ending Dec. 11th. During the first ten weeks of the current quarter the death-rate in the city averaged 25·1; the mean rate during the same period did not exceed 18·2 in London and 19·0 in Edinburgh. The 241 deaths in Dublin last week showed a further increase of 51 upon the numbers returned in recent weeks, and included 8 which were referred to scarlet fever, 8 to diarrhœa, 4 to "fever," (typhus, enteric, or simple), 3 to whooping-cough, and not one either to small-pox, measles, or diphtheria. Thus 23 deaths resulted from these principal zymotic diseases, against 22 and 21 in the previous two weeks; they were equal to an annual rate of 3·4 per 1000, the rates from the same diseases last week being but 2·1 in London and 1·6 in Edinburgh. The fatal cases of scarlet fever corresponded with the number in the previous week; those of diarrhœa and whooping-cough showed an increase, while those of "fever" had declined. Five inquest cases and three deaths from violence were registered; and 58, or nearly a quarter, of the deaths occurred in public institutions. The deaths both of infants and of elderly persons showed a further increase upon recent weekly numbers. The causes of 50, or nearly 21 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

BURMAH.

IN THE LANCET last week, in enumerating the medical officers serving in Upper Burmah, we inadvertently omitted mention of the name of Mr. Mackinnon, of the Army Medical Department, who was for some time the principal medical officer in Upper Burmah. Mr. Mackinnon remained at Mandalay in administrative charge until August, when he was replaced by Mr. Farrel, of the Indian Medical Service.

WAR OFFICE.—Army Medical Staff: Brigade Surgeon Philip Broke Smith, M.D., to be Deputy Surgeon-General, vice S. Fuller, retired; Brigade Surgeon William O'Halloran, from half-pay, to be Brigade Surgeon, vice P. B. Smith, M.D. The promotion of Surgeon-Major Henry William Alexander Mackinnon to the rank of Brigade Surgeon is cancelled, this officer having been granted the distinction of Companion of the Distinguished Service Order.

ADMIRALTY.—The following appointment has been made: Walker John E. Sumpter, M.R.C.S., L.S.A., to be Surgeon and Agent at Sherringham, Norfolk.

ARTILLERY VOLUNTEERS.—1st Fifeshire: Surgeon David Archibald resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the corps on his retirement.

RIFLE VOLUNTEERS.—3rd Volunteer Battalion, the Lancashire Fusiliers: Surgeon G. G. Tatham, M.D., resigns his commission.—2nd Volunteer Battalion, the Norfolk Regiment: David Chadwick Smith, Gent., to be Acting Surgeon.—5th Surrey: Surgeon G. F. White resigns his commission.

THE VOLUNTEER MEDICAL STAFF CORPS.—The Edinburgh Division: German Sims Woodhead, Gent., M.B., to be Surgeon.

Correspondence.

"Audi alteram partem."

THE FELLOW, THE MEMBER, AND THE FRANCHISE.

To the Editor of THE LANCET.

SIR,—I must be excused from attempting to follow your correspondent "Historicus" in an inquiry into my "motives" for taking the course I have felt it my duty to pursue in reference to the questions now at issue at the College of Surgeons, as well as into an explanation of "the part" which, according to him, I am "now playing." His remarks on these points I leave with confidence to be dealt with by the good taste of your readers—as I do his criticisms by their good sense. Nor have I any "personal justification" to offer or any "apology" to make to any man or to any body of men. In freely and openly stating my views at a public meeting on a public question, and in addressing my brother Fellows through the press on a matter that closely affects my and their collegiate interests, I need no justification, and most certainly will offer no apology.

But to pass from this personal question which your correspondent has raised, he asserts that there is scarcely a statement I make or an inference I draw that may not be controverted. But yet he altogether fails to disprove statements such as these: that the College of Surgeons has, under its present form of government, attained an unparalleled prosperity; that the value of its diploma is rising in professional and in public estimation; that so little importance does the great body of its Members appear to attach to the franchise, that out of more than 4000 who could five years ago have easily acquired it only nine availed themselves of that privilege; that the Council as at present constituted is a thoroughly representative body; and that the Members of the College have never possessed the elective franchise, the self-election of the Council up to the period of the institution of the Fellowship being a Charter right. These are a few of my statements that he has not succeeded in controverting.

Your correspondent misquotes me in respect to the questions of the Fellowship of the Royal Society. What I say is this: "Many of the Fellows possess the coveted distinction of the F.R.S.; how many, if any, of the Members *who have not sunk the Membership in some higher university degree* I know not." He omits the sentence I now put in italics. But this comprises the whole gist of the matter Many of the leading physicians in London who now possess the F.R.S. took the Membership of the College on the completion of their studies, in order to have a qualification whilst working and waiting for the M.D. degree. But they have so effectually sunk the M.R.C.S. under the degree that they never append it to their names in their publications or in the rolls of the Societies, and the only clue to their connexion with the College of Surgeons is to be found in the list published in the Calendar of that institution.

In conclusion both of this letter and of this correspondence, let me say this, in justice to others, that the publication of my pamphlet at the time that the Council was about to issue its circular to the Fellows was an accident, determined solely by the date of the late meeting, for the pamphlet is simply

an amplification of what I said on Nov. 4th; and further, that I alone am responsible for every opinion, statement, and inference contained in it; not a single member of Council or official connected with the College had the faintest idea that such a pamphlet would appear. With me rests the sole responsibility of its publication, and of its circulation amongst the Fellows. "*Laudatur ab his, damnatur ab illis*," might well be its motto; for if, unhappily, it has provoked the hostility of "Historicus" and his allies, I am consoled by the commendations it has called forth from those whose opinions I most value.

I am, Sir, yours faithfully,

Dec. 14th, 1886. —— JOHN ERIC ERICHSEN.

To the Editor of THE LANCET.

SIR,—The thanks of every Member of the College of Surgeons are due to "Historicus" for his brilliant rejoinder to Mr. Erichsen in your last issue. No more opportune moment could have been chosen for this reply than the eve of the poll that the Council of the College is taking of its Fellows, on the subject of what is now popularly called the "Members' Franchise." Mr. Erichsen has, we understand, in a mistaken sense of duty, sent to every Fellow a copy of his speech at the College on the 4th, or rather of what that speech might have been if time had permitted on that occasion; and now that the other side of the question is thus clearly brought home to them, the Fellows will have an opportunity of forming an unbiased judgment; attack and defence are each set forth, and for the present the matter is in the hands of the Fellows. The Association of Members has not thought it to be becoming to go cap in hand to beg for the votes of the Fellows; but what a body of men cannot gracefully ask for itself may, without loss of dignity, be asked for by others. If the result of the poll is adverse to our claims—as it may be from the fact that the College Council has not seen fit to lay the entire resolution adopted at the general meeting before the Fellows,—we have still the Privy Council to approach, and, if that body should not grant our petition, we have, beyond that, the Houses of Parliament. We trust, however, that in the College itself this reform may be carried out, and that when the Privy Council is approached it may be by a united body, the President and Council praying that the new Charter may contain the provisions we desire. For our own part, we have always endeavoured to keep the issue simple, and, leaving aside all questions of change in other corporations and colleges, shall continue to ask for reform in our own College of Surgeons, and that alone. When that is accomplished, it may be that other corporations will be only too anxious to follow a good example, and their councils, anticipating the desires of their diplomates, themselves throw open the portals. But one door is sufficient for us to knock at.

We are, Sir, your obedient servants,

WARWICK C. STEELE,
WM. ASHTON ELLIS,
Hon. Secs. Association of Members of the Royal College of Surgeons.

THE FELLOWS, MEMBERS, AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—As a Fellow of the Royal College of Surgeons, I have been asked to answer two questions: 1. Whether in my opinion, Members should have a vote for the election of the Council? 2. Whether, in my opinion, Members ought to have seats on the Council? I have answered the latter question by a decided "Yes." The Members are a highly educated and able body of surgeons. The average Member of to-day is probably the equal to, or perhaps the superior, of the average Fellow of twenty years ago (about my own standing). From their ranks many able men of ripe experience might be picked whose services on the Council might be invaluable to the College. The other question I have answered in as decided a negative. "Historicus" argues, in your columns, from the history of the College prior to the present century that the Members have a "moral right" to the so-called "franchise." This is beside the question. The real question is: "What is the best way of electing the Council of the great College which has charge of the interests of the profession of surgery?" I do not think that, although from what I have already said as to the propriety of Members having seats on the Council it will be understand that I cordially admit their fitness to exercise the franchise, the proposed concession would give them real *representation*, or that it would tend to improve the quality of the Council. In such a constituency as is proposed, an election would be followed by one of two results: either the seats on the Council would be placed at the disposal of the larger medical schools, or they would be at the mercy of some powerful association. As a matter of fact, a recent experiment in what is practically an almost identical constituency has proved that the latter of the two alternatives would operate. Reference to page 1172 in the current number of the *Journal* of the British Medical Association will show that such a result was actually calculated upon by the moving spirits of the Association. I find no fault with the list of able men who have been, through the influence of the Association, selected to represent the profession in the Medical Council. I am prepared to go further, and say that no other body than the British Medical Association, *as at present constituted*, could be better entrusted with the appointment of representatives of the profession. I submit, however, that the appointments of so-called representatives through the influence of a powerful Association is not *representation* at all. I am a member of the Association; I cordially acknowledge the useful work it has done and is doing, and I believe that it still has much useful work before it; but the life history of all Associations should teach us that the day will come when it will not be safe to entrust the control of the affairs of a great institution like the College of Surgeons to its waning vitality. In framing its new Charter, the College will have to legislate not only for to-day but for the future. The remedy for the alleged abuses in the present constitution of the College will not be found in direct (so-called) representation. I must confess to a feeling that to a certain extent the grievances of the Members are more sentimental than real. Those who are out of office look on things with very different eyes to those that are in. I can remember the time when some of those now on the Council were clamouring for reforms of which riper experience and a closer insight into the affairs of the College have convinced them of the inexpediency. Thus the reformers of yesterday become the Conservatives of to-day. Still there may be room for reform. Certainly the Council is not infallible; witness its present mistaken attitude towards the Apothecaries' Company. Something ought to be done to make things pleasanter between the Council and the Members. The admission of Members to seats on the Council would do something. To supplement this, I think that a scheme of *indirect* representation might be devised, which, while respecting the "moral rights" of the Members, would secure the election of a fairly representative Council. I would suggest that under the new Charter Members should take part in the formation of the elective constituency. Thus: let the Honours Examination for the Fellowship continue, as at present, to entitle to the franchise, but let the Members have the privilege of electing, *honoris causâ*, a certain number of Members of not less than ten years' standing to the Fellowship. With such a provision, and the concession to the Members of the privilege of sitting on the Council, a sound representation would, I think, be secured.

I remain, Sir, yours faithfully,

Rowlands, St. Mary Cray, Dec. 13th, 1886. C. H. ALLFREY.

To the Editor of THE LANCET.

SIR,—The circular addressed to the Fellows of the Royal College of Surgeons does not fairly place before them the issue upon which their opinion is asked. In answering it, however, it may be put right by adding the words "if of ten years' standing" to the first question, and "if of twenty years' standing" to the second. Whilst I have no doubt as to the propriety of admitting the Members to the franchise, I do not think it at all necessary to give them the privilege of a seat on the Council. There are a great many Fellows scattered all over the country, occupying a high scientific as well as social position, who are general practitioners, and quite competent to safeguard the interests of the profession

in all respects, if elected to the Council; and in my opinion it would not be wise so greatly to enlarge the area of selection as would be the case were the second proposition carried into effect.—I am, Sir, yours obediently,

Norwich, Dec. 15th, 1886. THOS. W. CROSSE, F.R.C.S.

To the Editor of THE LANCET.

SIR,—The circular from the College of Surgeons to ascertain the opinion of the Fellows upon the vital principle of representation of Members upon the Council has been issued, and I venture to say is found by most of an unsatisfactory character. These are the questions asked:—(*a*) In your opinion should Members of the College be allowed to vote for Fellows as members of the Council? (*b*) In your opinion should Members of the College be eligible for seats on the Council? In answering them I hope each Fellow will ignore the unqualified nature of the questions, and state his views more broadly, and rather with reference to the resolution submitted and carried at the last general meeting of the Fellows and Members on Nov. 4th—viz., "That it would conduce to the welfare of the College, and tend to promote the interests of medical polity and education—(*a*) if Members of ten or more years' standing were empowered to vote (separately or conjointly with Fellows) in the election of the Council; and (*b*) if Members of twenty or more years' standing were eligible to sit in the Council to the extent of not more than one-fourth of the Council." I would also ask the Fellows to take this opportunity of expressing their opinion on the action of the Council in lowering and depreciating the status of the Fellowship, by the adoption of a modified examination to Members of a certain standing—a measure inflicting great injustice upon the younger Fellows (especially the provincial ones) in many ways, though perhaps of little moment to those senior ones who hold seats on the Council. The Fellowship was an evidence of a thorough anatomical and surgical knowledge, and to obtain it extra years of study were required, often involving no little sacrifice. The profession and the public relied upon it. It will be so no longer. By their action in this, and by their conjoint action with the College of Physicians in refusing to co-operate with the Apothecaries' Society to bring about practically a one-portal system for London (so much to be desired by all who have the welfare of the profession at heart)—by these two acts alone the Council have shown their inability "to read the signs of the times," and have forfeited the confidence of not a few of their present constituents. The time has come when a radical change in the management of the College is not only desirable, but absolutely necessary. I could have said much more on both the above topics, but fear to trespass on your valuable space. The legal right of Members has been so fully discussed that further comment is unnecessary. In conclusion, I will mention briefly a few of the alterations that might fairly be conceded, and which would probably benefit the College, its Fellows, and Members. (*a*) The Council to consist of three-fourths Fellows elected by Fellows only, and one-fourth either Fellows or Members elected by Members only. Voting-papers to be permitted. (*b*) The president of the College to be a Fellow or Member of a certain standing, and elected annually at a general meeting of Fellows and Members. (*c*) The recent modifications affecting the status of the Fellowship to be abolished. The Council to have the privilege of recommending not more than two members of the profession distinguished in surgery for election to the Fellowship at each annual meeting. (*d*) No alteration to be made in the Charter without consulting the Fellows and Members at a general meeting to be called for that purpose.

I am, Sir, your obedient servant,

December 16th, 1886. F.R.C.S.

To the Editor of THE LANCET.

SIR,—Your leading article in this week's issue must echo the sentiments of many provincial Fellows. For some years the academic status of the diploma has degenerated. Not only has the preliminary educational standard been lowered, but even the Primary has been rendered easier by giving a selection of questions to be answered instead of the compulsory "all four" as formerly obtained. Now the Council, without consulting the general mass of Fellows, propose to still further depreciate the title by admitting, without any test of their fitness for such an academic distinction, a certain number of Members annually, and, secondly, to admit any Members of fifteen years' standing to the Pass without subjecting them to what you have justly called the *pons asinorum* of aspirants—the dreaded Primary. What privileges have the general mass of provincial Fellows? They care little about the rights of voting, and a seat on the Council, as is rightly urged in your leader, is within the reach of a very small minority. Have they ever been consulted on vital questions relating to the College till this last week? The chief privileges, then, of provincial Fellows are the academic distinction and status the title gives them. However wisely and delicately the proposals of the Council are carried out, many an injustice would be done to Fellows in small provincial towns, where the value of the Fellowship has begun to be appreciated. An imaginary case may easily be drawn. An M.R.C.S., through hard work and local influence, has acquired a large practice; he is a good all-round man, but not in any way well read or of any scientific learning. He is acquainted with many London Fellows from having sent them cases up from the country periodically. Without the slightest trouble he would receive the highest honour the College could confer on him, without ever having read for or passed anything but a minimum examination. Not only does he suddenly become the academic equal of the man who has devoted three or four years to the acquisition of the title, but he really becomes his superior, for it cannot but get bruited abroad that the Fellowship was conferred on him because he merited it, whilst the other man only got it by examination, and any man can pass examinations who has (not necessarily brains) but time, money, and applicability. Where then would be Sir Benjamin Brodie's explanation of the origin and institution of Fellows? It seems as if the London Fellows (as represented by the mass of the Council) hope to retain their vested interests by simply diluting them with a batch of new Fellows. The provincial Fellows, on the other hand, wish the integrity of the title to be maintained, or, if possible, made more select still. Let the Members have their electoral rights, and let them even have a chance of a seat on the Council under certain restrictions, and what have the Council to fear? The following two paragraphs, taken from a letter signed "Historicus," in your issue of Dec. 11th, deserve repetition and re-repetition: "The academic status (of the Fellowship) is being persistently debased in the silly hope of allaying the disaffection of a few Members by the offer of a cheap but degraded Fellowship"; and "The truth is, that the intellectual and professional prestige of the Fellowship is being seriously prejudiced by its forced association with an exclusive and obnoxious electoral privilege—a privilege, be it remembered, which is also an usurpation."

I am, Sir, yours faithfully,

Dec. 13th, 1886. A PROVINCIAL FELLOW.

THE HOSPITAL FOR WOMEN, LIVERPOOL.

To the Editor of THE LANCET.

SIR,—I shall feel much obliged by an early insertion of the enclosed in THE LANCET.

I am, Sir, yours faithfully,

Rodney-st., Liverpool, Dec. 12th, 1886. J. CAMERON, M.D.

4, Rodney-st., Liverpool, Dec. 12th, 1886.

DEAR SIR,—In a letter addressed to you by Dr. Imlach, and published in THE LANCET of the 11th inst., my resignation as a member of the "Hospital Inquiry Committee" is referred to in the following ambiguous terms:—"On March 8th, Dr. Cameron visited the Hospital for Women as one of the delegates from the Inquiry Committee. In the presence of yourself and the vice-president, the case-books, hospital registers, and various memoranda were examined, and the lady superintendent and nursing staff subjected to a severe cross-examination. At the next meeting of the Medical Institution, he resigned from the Inquiry Committee, declining to serve any longer." To prevent any misunderstanding, I venture to trouble you with an explanation of the cause (omitted by the writer) of my resignation. After my visit with Dr. Alexander to your hospital, Dr. Imlach was taken seriously ill, and for a time his life was in extreme danger, and I was reluctant, under these circumstances, to continue an inquiry which, by the anxiety it was likely to occasion, I feared would aggravate his condition. I

availed myself of the first opportunity (the meeting of the Medical Institution alluded to by Dr. Imlach) to tender my resignation, stating publicly to the members the grounds of that step. I should wish to add that I highly approve of the report of the Inquiry Committee, which, I consider, takes a very moderate view of the objections to the operation in question. I remain, dear Sir, yours faithfully,

J. CAMERON, M.D., &c.

The President, Hospital for Women, Shaw-street.

P.S.—I am sending a copy of this letter to THE LANCET.

ARE SMALL-POX AND COW-POX ONE AND THE SAME DISEASE?

To the Editor of THE LANCET.

SIR,—In reply to Mr. Fleming's query, I would remind him of the following points:—The physical characters of the microbes both of small-pox and vaccinia are identical, if we neglect difference of size. In both diseases the micrococci tend to arrange themselves in groups of four, and in the early stages the Malpighian mucosus is the site selected for the development of each. Pincus's description of the microscopical changes in vaccinia corresponds closely with that by Weigert of the early development of the small-pox pustule. Localisation in vaccinia probably results from the local nature of the inoculating process, the irritated parts offering the most eligible sites for exhaustion of the local manifestations. If these were excised within forty-eight hours of inoculation a more generalised exanthem would show itself (Chauveau). Infection in variola is general, not local. Constitutional symptoms consequently precede the rash. The process is centrifugal. In vaccinia the process is centripetal, and general symptoms, when present, come late. When variola is *inoculated* the same thing happens, but then the infective process is sufficiently vigorous to induce secondary general infection and a disseminated eruption. Mr. Fleming can scarcely question the identity of cow-pox and vaccinia. He, however, dislikes the term "attenuation," though he will scarcely deny that Pasteur and Toussaint have independently proved the possibility of attenuating the virus of charbon by the aid of altered temperature, or that they have *fixed* the attenuation thus obtained, so constituting of it a generic character. If this be possible with other microbes, why not with that of variola? Man's temperature is about 37·5°C: $\frac{3}{4}$°C higher in the horse, and as much higher still in the cow. These conditions, judging from analogy, are those favourable to attenuation. Virus from horse-pox or from cow-pox induces in man a characteristic eruption; the former sometimes causing marked constitutional symptoms with stray vesicles; the latter is less active, and seldom develops to so great an extent. But, after passing through the cow, horse virus loses its excessive activity, and acquires the name of cow-pox, which, when used for inoculating man, causes no general symptoms. Repeated inoculations of cow-pox on other cows tend to fix the character of the virus—corresponding thus to the fixed attenuations of charbon virus mentioned above. In plants, modifications corresponding to such attenuations are possible. Why not with microbes? Many authors have deemed it right to affirm that variola, horse-pox, and cow-pox are not only interchangeable, but that infection with one of them is necessary to the production of the disease itself in the others. May we not go a step further, and suggest that the *same cause*—a specific virus floating in the atmosphere—may account for all of them, any differences being satisfactorily explained by variations of soil and temperature? In this way so-called "spontaneous cow-pox" would be easily accounted for; the protective power of any one disease as against infection with the others would be more easy to understand, and it would be unnecessary to say, with Mr. Fleming, "that small-pox and cow-pox were different and antagonistic diseases." Though man may as yet have been unable to accomplish the artificial transmutation of small-pox into cow-pox, nature has methods with which we are unacquainted, but whose results Jenner's great discovery has enabled medical science to utilise. If Mr. Fleming will refer to Warlomont's Manual of Animal Vaccination, he will find more extensive reference to the subject than your columns can admit from, Yours obediently,

Pall Mall East, S.W., Dec. 1886. ARTHUR HARRIES.

DEATH OF A NIECE OF HARVEY.

To the Editor of THE LANCET.

SIR,—In the obituary column of to-day's newspapers is recorded an event which is suggestive of interest to our profession. "On the 1st inst. at Upp Hall, Braughing, Mrs. Towers, in the ninety-eighth year of her age, the last surviving daughter of the late Admiral Sir Eliab Harvey, of Rolls Park, Essex." In the press and hurry of our day's work, the notice is likely enough to pass unheeded; but that it refers to the last of the seventh generation in direct descent from that prosperous city merchant, Eliab Harvey of London and Chigwell-park, brother of the discoverer of the circulation of the blood, should be enough to claim a moment's attention from anyone who has the slightest reverence for the past. From time to time, outside our special professional life, the public interest is awakened by the overthrow of some fresh pretender to the rightful glory of the immortal physiologist and physician, by the erection of a statue in his native place, by the reverent re-entombment of his remains, or by the publication in facsimile of the note-book in which he himself recorded his observations and his labours. But gratifying as these events may be, they lack the living breathing kinship that the above simple announcement awakens. The deceased lady was the last of nine children of Admiral Sir Eliab Harvey and Lady Louisa, daughter of Earl Nugent. Her three brothers died childless in their father's lifetime, and, in that line at least, with her the name of Harvey ends. How the gallant old admiral, who for forty years fought the battles of his country, and ended by commanding the *Téméraire* at Trafalgar, is duly set forth on the marble tablet in Hempstead Church, where he sleeps with fifty of his kindred. His birth in 1758 takes us back a century ago, and those who are curious in such matters may fill in the steps 'twixt him and his first namesake, if they consult the pedigree of the Harvey family as set forth in Wilson's History of S. Laurence Pountney, London, 1831, at page 228, and the coffin inscriptions in the Harvey vault, lately published in the Miscellanea Genealogica et Heraldica, vol. i., series 2.

I am, Sir, yours faithfully,

W. H. ALLCHIN.

Chandos-street, Cavendish-square, W., Dec. 4th, 1886.

A "NEW" METHOD OF EXCISING THE KNEE-JOINT.

To the Editor of THE LANCET.

SIR,—I see by your report that at the Medical Society on Monday night Mr. Herbert Allingham described as such the method of making a long vertical incision and dividing the patella into two lateral halves. I have twice within the last three or four years shown such a case at the West London Medico-Chirurgical Society, and the method was not new then. Anyone who will refer to my "Index of Surgery," third edition, p. 128, will see it briefly noticed there. I believe the priority of performance of this operation is due to Professor Ollier, and I am certainly of his opinion that it ought to be reserved for cases of injury to the knee-joint. It does not, according to my experience, possess a single one of the advantages which your report states that Mr. Allingham claims for it. On the contrary, it gives comparatively limited and incommodious access to the joint, and especially to its posterior and lateral recesses. In any case which proved, when the joint was opened, to be one in which the bone was very little affected, it would still be impossible, through this perpendicular section, to erase the back of the joint properly without excising much healthy bone, and thus making the prospect of restoration of mobility practically hopeless. Compare with this the plan, originated by Volkmann and adopted by Ollier and others, of opening the joint by transverse division of the patella. Surely no one who has tried both can doubt the superiority of the latter. The quadriceps is no more weakened by one than by the other. There is no ligamentous or fascial structure divided in the operation which cannot be reunited by buried sutures just as effectually as can the patella itself. On the other hand, when the case to be dealt with is one of *injury*, the indications are quite different, and the longitudinal incision, from its possessing, although in a small degree, the advantages common to all longitudinal incisions as com-

pared with transverse, may be reasonably preferred, for after injury there is no tubercle to be ferreted out of corners, but simply the indication to remove just as much and just as little injured bone as will suffice, and to cleanse the joint of blood and dirt.

I remain, Sir, your obedient servant.

Dec. 1886. C. B. KEETLEY.

NOTE ON THE EXISTENCE OF IODINE IN THE FREE STATE IN A MINERAL WATER.

To the Editor of THE LANCET.

SIR,—It has been known for many years that the water of the Woodhall Spa, near Lincoln, is exceptionally rich in bromides and iodides. In the course of an investigation recently conducted by me, I have made an observation which appears to be important. I find that there is free iodine in the water—not a mere trace of free iodine, but sufficient to impart to the water a brown colour of considerable depth of tint. The proof of the presence of the free iodine in this water is very striking. There is the formation of the blue iodide of starch when a little starch paste is simply poured into the water. Another very striking characteristic is that when the water is shaken up with one-twentieth of its volume of bisulphuret of carbon it loses its brown colour, whilst the bisulphuret of carbon assumes a pink-violet colour, owing to the solution of iodine by the bisulphuret of carbon. So far as I am aware, this is the first instance in which free iodine has been found in appreciable quantity in a natural water. For many years the Woodhall Spa has been celebrated as a valuable remedy in skin diseases. The fact that it is a solution of free iodine is interesting in this connexion, and is well worthy of the attention of the medical profession.

I am, Sir, yours obediently,

Dec. 15th, 1886. J. ALFRED WANKLYN.

THE TREATMENT OF ALCOHOLISM BY STRYCHNINE.

To the Editor of THE LANCET.

SIR,—*A propos* of your interesting leader on the above subject published in THE LANCET of the 16th ult., I should like to be allowed to make a few passing remarks. The treatment in question, as recommended from theoretical and clinical researches by Luton, Giacomini, Magnus Huss, and other continental *savants* of the medical profession, and now tried by Russian practitioners, notably by Drs. Popoff and Talvinski, was extensively experimented upon, so far back as 1869, by Deputy Surgeon-General F. G. Joynt, who was at the time medical officer in charge of the European General Hospital, Bombay. I am not aware if any other army medical officer followed his method of treatment; but suffice it to say that the drug proved in his hands a sheet-anchor in cases of ebriositas (now termed alcoholism) and delirium tremens. I may *en passant* mention that Dr. Joynt's solution of strychnia was, unlike the British Pharmacopœial preparation, made with dilute nitric acid and a smaller proportion of the alkaloid, and the dose usually exhibited was twenty-four minims two or three times a day.

I am, Sir, yours faithfully,

Aden, Nov. 25th, 1886. A. LYON MERCADO, S.M.D.

ST. ANDREWS UNIVERSITY.

(From a Correspondent.)

THE Senatus Academicus of the University of St. Andrews has presented a memorial to the Right Hon. the Secretary of State for Scotland, praying for two additional chairs for its medical faculty—viz., a chair of anatomy and a chair of botany. The St. Andrews Graduates Association are also moving in the same direction. About six weeks ago a deputation appointed by the University had an interview with the Right Hon. the Secretary of State for Scotland and the Right Hon. the Lord Advocate, urging the propriety of augmenting the medical chairs to the extent indicated, by introducing a clause or clauses to that effect into the forthcoming "Universities (Scotland) Bill." St. Andrews has always felt the necessity of increasing its teaching medical staff, and attempts have been made from time to time in this direction for very many years past. The present seems a favourable opportunity for attaining the desired end. The University is desirous of increasing its teaching staff to enable it to give two *anni medici*, the period of residence required for medical graduation at the Scottish universities. With two additional medical chairs, St. Andrews would not only be able to give the first two years of the medical curriculum, but it would be enabled to draw upon the Extra Academical and Hospital Schools of the United Kingdom for the last two years, an arrangement which could not fail to be very convenient to many aiming at a university medical degree. St. Andrews has now a seat at the General Council of Medical Education and Registration of the United Kingdom, and is splendidly equipped as regards the teaching of chemistry, physiology, and zoology. It has also a very fine medical library and museum, and the amenities of St. Andrews as a place of study are everywhere recognised. Of late years St. Andrews has made great strides in science teaching, and if it only succeeds, by public or private endowment, in obtaining its present quest, it may in the future become as well known for its medical teaching as it has in the past been for its divinity and arts teaching.

LIVERPOOL.

(From our own Correspondent.)

THE MEDICAL INSTITUTION AND THE HOSPITAL INQUIRY COMMITTEE.

THE special general meeting of the members of the Medical Institution, which was held on the 3rd inst., to receive the report of the Hospital Inquiry Committee, was largely attended, there being more than a hundred gentlemen present. The President (Dr. Nevins) was in the chair. The report was read by Dr. Wm. Alexander, the secretary to the Committee, and was listened to with the deepest interest by all present, each of whom was furnished with a printed copy of the report. At its conclusion the adoption of the report and a vote of thanks to the Committee were moved by Mr. McCheane, consulting surgeon to the Lock Hospital, and a former president of the institution. This was seconded by Mr. C. B. Wilson, consulting surgeon to the Lying-in Hospital, and after some discussion it was carried by a large majority. Dr. Imlach spoke at considerable length, and as some of his statements were repeated in a letter which he addressed to the President of the Hospital for Women (a copy of which appeared in THE LANCET of the 11th inst.) it appears desirable to notice some points in detail. Dr. Cameron's reason for resigning his seat on the Committee was a purely personal one. He had been called in consultation with Dr. Glynn to see Dr. Imlach when the latter was dangerously ill, and expressed an opinion that the inquiry should not proceed; but as this did not meet with the views of the other members of the Committee he resigned his seat. Mr. Bickersteth's reason for ceasing to attend was because he found himself quite unable to devote the time which he considered necessary to so important an inquiry. The primary object of the Committee was not to prepare a scientific report for the profession, but a report on the management of the Hospital for Women to the Medical Institution. The Committee were only asked to go into the cases which were the subject of operations during the year 1885. Between the early summer and the month of October the Committee held no meeting on account of the trial of Casey *v.* Imlach. The only thing done by the Committee was to request information from medical practitioners as to cases which they had seen of patients who had come under their care before and after being patients of the hospital. This information was given quite impartially and in confidence. That it could have had any prejudice against Dr. Imlach in the trial was disproved by the jury giving a verdict in his favour, without waiting for the judge's summing up. The general opinion of the profession here is that the report is a most admirable one, being exhaustive, fair, impartial, and most moderate. Too much praise cannot be given to the members of the Committee for their prolonged and self-denying devotion to the extremely invidious duty cast upon them.

DEATH OF DR. RICHARD JOHN LUPTON.

This gentleman, whose death was noticed in last week's LANCET, will be well remembered by many an old fellow-student. He commenced his medical studies in 1860 at the Liverpool Royal Infirmary School of Medicine, where he studied for three years, becoming subsequently a student at University College, London, and at Aberdeen, where he graduated with honours. He returned to Liverpool in 1866, and commenced practice in the neighbourhood wherein he resided until his death. He held office formerly as honorary assistant surgeon to the Ladies' Charity and Lying-in Hospital, and at the time of his death was one of the honorary medical officers of the Hospital for Women. For the vacancy thus created there are already many candidates.

THE ROYAL INFIRMARY.

At a special general meeting of the trustees just held, Dr. Waters was elected consulting physician to the Royal Infirmary, having recently resigned the office of physician; and to the vacancy thus created Dr. Richard Caton, physician to the Northern Hospital, was elected without opposition. Dr. Waters is well and favourably known as an authority on chest diseases, and it is hoped that he has many years of useful work before him.

LOCAL HOSPITAL CHANGES.

At the Northern Hospital there is a vacancy for a physician, in place of Dr. Caton, appointed to the infirmary, and Dr. James Barr is a candidate. At the Stanley Hospital there are vacancies for a physician and a surgeon, owing to the resignation of Dr. Costine and Mr. Sheldon, who have each held office for the full period of twenty years. For these vacancies Dr. Whitford and Mr. Robert Jones are already candidates, and others will probably be forthcoming.

Liverpool, Dec. 15th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

GATESHEAD WORKHOUSE CHILDREN'S HOSPITAL.

MR. KNOLLYS, the Local Government Board Inspector for the district, has made some serious statements as to the condition of the children in the hospital of the workhouse at Gateshead. The statements have excited much public attention, and our local press has been also much occupied with the matter. Mr. Knollys says that on the occasion of his visit to the hospital he found twenty-eight boys and girls, ranging from thirteen years of age downwards, all suffering from some disease of the skin. It is practically impossible, from the structure of the building, to keep the sexes separate; that the floor was damp, and the underclothing on the beds was rendered foul by discharge; that on the day of his visit twenty-two out of twenty-eight children slept two in a bed; that the pillows were dirty, and that the sheets were little better than a patchwork of rags; that the straw of the beds actually came in contact with the skin of the little patients, which from the nature of their diseases was naturally tender; that four or six, and on one occasion eight, boys had washed in the same water; that eight or nine, and on one occasion only four, towels had been used for drying the skins of twenty-seven children; that in one room he found a woman suffering from a syphilitic disorder, that three children suffering from measles were in the same room, and that the room, which could not be ventilated as it should be, had a most offensive smell. He further stated that he had again and again complained of the dirty and uncared-for appearance of the children in the building. Mr. Knollys made also suggestions to the guardians that a competent nurse should be appointed instead of the present pauper nurse, and that the building be no further used for its present purpose. The guardians have been highly indignant at Mr. Knollys' charges, some of which they have denied, but some of the minor ones have been admitted. Some of the more indignant guardians admitted that they had not visited the hospital in question. Dr. Cook, the medical officer of the workhouse, explained that the wooden building condemned by the inspector was intended only to last ten years, and was only regarded as a temporary building for the reception of patients during the fever epidemic which existed when it was erected. The number in the house had increased, but the accommodation had not increased in proportion. Dr. Cook further explained that the accommodation he had formerly at the "house" for isolation purposes had been taken from him, and he had to take on himself responsibilities which he did not feel justified in taking. He had to use the best means he had at hand, and to take into the hospital a number of cases suffering from very infectious ailments of the eye. The hospital was full, and he had no means of isolating disease. The feeling here is that a state of things such as described by the inspector and their own medical officer is not creditable to the intelligence, to say nothing of the humanity, of the guardians of an important and wealthy borough like Gateshead.

NEWCASTLE HOSPITAL SUNDAY.

The returns on Hospital Sunday and Saturday collections continue to show a decided improvement on last year's. The fourth list shows that £2000 12*s.* 9*d.* has been received from places of worship, as against £1898 last year. From workshops £1580, as against £1231 last year. This improvement is all the more gratifying taking into account that many of our industries are far from busy this winter.

SCARBOROUGH HOSPITAL.

The report of the house-surgeon, Dr. Kenneth Frazer, shows that during the month of November he made 1075 visits to patients' houses in connexion with dispensary work. There has been an epidemic of measles in the district, I believe.

NEWCASTLE INFIRMARY.

In view of the financial position of the Newcastle Infirmary, a special committee has been appointed to take evidence, and the public is invited to take part in the matter and to offer any evidence likely to conduce to the object in view—namely, the placing of the institution in a more satisfactory financial position.

Newcastle-on-Tyne, Dec. 13th.

IRELAND.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THOSE candidates who failed in one subject only at the recent First and Second Professional Examinations will be permitted to take out lectures and hospital practice this year and go up in July next for the examination they missed. Those who fail in more than one subject lose an entire year of their medical studies, and no credit will be given for hospital and lectures taken out. There will be a supplemental examination for the Third Professional Examination, but not for the First and Second, and candidates who are allowed in for examination will pay, instead of three guineas for re-examination, a fee of eight guineas. At present there are three lady students attending the lectures on Chemistry now being delivered by Sir Charles Cameron at the Medical School of the College. There will be two candidates for the Vice-Presidency of the College at the election in June next—viz., Mr. Henry Fitzgibbon and Mr. H. Gray Croly, both being visiting surgeons to the City of Dublin Hospital.

THE EPIDEMIC OF ENTERIC FEVER IN CORK.

Although the epidemic of fever recently referred to in these columns may mainly be attributed to the defective sanitary condition of the town, yet undoubtedly the water-supply is not all that could be desired. For example, at Macroom the sewer matter is discharged into the river from which the supply of water for the citizens is obtained, and no doubt there are other possible sources of pollution. At the suggestion of the public analyst monthly analyses of the water will be made for the future, as is the practice in all large cities. During November over seventy cases of enteric fever were under treatment in the hospitals or by the various dispensary medical officers, with a mortality of about 3 per cent.

THE SANITARY CONDITION OF THE DUBLIN BARRACKS.

On several occasions attention has been drawn to the alleged insanitary condition of some of the Dublin barracks, more particularly the Royal Barracks; and it was a matter of surprise, considering the number of deaths from enteric

fever occurring in the latter institution, that a thorough investigation was not at once ordered by the military authorities. At last, however, they appear to have awakened from their lethargy, and I am informed that the Commander-in-Chief has appointed a commission to investigate and report on the subject. Grave doubts have existed for years as to the sanitary state of the Royal Barracks, and the commission, by a thorough overhauling of the sewerage arrangements, will carry out an investigation, which is urgently required.

MUSCULAR ANOMALY.

There is at present in the dissecting-room of the Ledwich School of Medicine an example of the biceps flexor cubiti taking its origin by three heads instead of two, so that it might be designated an anterior triceps. The third head came off close to the insertion of the lower part of the coraco-brachialis muscle, on its outer aspect, and passed to the posterior part of the muscle. Each head was well defined. This anomaly I believe to be extremely rare.

Dublin, Dec. 14th.

BELFAST.

(From our own Correspondent.)

THE VACANT SENATORSHIP OF THE ROYAL UNIVERSITY.

A LARGE number of the northern graduates, who are Presbyterians, had agreed to support the candidature of Professor O'Sullivan of Cork, as they believed that Cork should get a share of the representation on the Senate of the Royal University, and, further, as the vacancy was caused by the death of the Rev. Dr. Kavanagh, they thought that it was but just that another member of the Catholic body should be elected. However, owing to the recent action of the Government in appointing Dr. O'Dyer, the Catholic Bishop of Limerick, a senator of the Royal University in room of the late Dr. Fleming Stevenson, a leading Presbyterian, the coming contest has assumed a new phase. The members of the Presbyterian Church consider they had a hereditary right to Dr. Stevenson's seat, and they urged the Lord-Lieutenant to appoint Dr. Todd-Martin, a very distinguished graduate of the late Queen's University. As this recommendation has not been attended to, it is feared by many that Professor O'Sullivan may at the eleventh hour lose his expected northern support.

THE LAGAN NUISANCE.

At the present time a great deal of discussion is taking place, both in the public press and in private circles, in reference to the Lagan nuisance. This river is always greatly polluted by receiving the abominable Blackstaff, as well as many other sewers, and at certain times of the year, especially in summer, the smell arising from it is simply intolerable. The Town Council propose building two main sewers, one on each side of the Lagan, which would intercept all the various drains which now open into that river as well as into the Blackstaff, and which are planned to discharge their contents in deep water far beyond the harbour. Further, it is arranged to narrow and deepen the channel of the Lagan and to construct substantial banks. A section of the public are supporting another scheme, which aims at purifying the river by the construction of locks. By this plan the present offensive mud-banks would be placed permanently under water, thus rendering them innocuous; an ornamental pond suitable for boating would be formed; and the flow of the Lagan would be used to increase the velocity, dilute, and direct the flow of the Blackstaff and sewers at present discharging above the Albert Bridge, so that the sewage would be carried out to sea and not returned by the flow tide. It is satisfactory to find that public opinion is being aroused to the necessity of having this terrible nuisance abated.

THE ROYAL HOSPITAL.

As the financial condition of this charity is again in an unsatisfactory state, it has been suggested that, in commemoration of the Queen's Jubilee, a sum of money should be subscribed, the interest of which could be devoted to this institution; and a very energetic member of the board of management writes to the press advising that the hospital should be removed to the place where the old charitable society is at present located. This would be a most desirable change, as there is a grave suspicion that the hospital is placed in anything but a good sanitary situation, and its present size is not adequate to the requirements of such a rapidly increasing town as Belfast. During the present session there are 130 students receiving clinical instruction, while last winter there were 162. The appointment of a new matron took place on Saturday, when Miss Isbitt (Canterbury) was unanimously chosen out of twenty-six candidates.

LISBURN DISPENSARY.

At a meeting of the Committee of the Lisburn Dispensary district held on Monday, Dr. James Jefferson, the brother of the late medical officer of the district, was appointed dispensary doctor. The salary of the late Dr. John Jefferson was £100 per annum, but the Lisburn Board of Guardians decided, in view of the present agricultural depression, to reduce the income to £80, and at this salary Dr. Jefferson was elected.

DEATH BY SUFFOCATION.

Two women, mother and daughter, were found dead in a house in Belfast on Monday. The discovery was made by another daughter who slept with them, and who was so overcome that she did not awake until twelve o'clock, seven hours after her usual time. On the police being informed, they searched the house, and found a quantity of smouldering cinders in a vessel under the bed. The vapour from this vessel in a small and badly ventilated room is supposed to have suffocated the women, although there is a supposition that the deceased may have been injured by eating tinned meat, which, it is said, constituted the supper.

Belfast, Dec. 7th.

PARIS.

(From our own Correspondent.)

PROFESSOR PETER'S INAUGURAL LECTURE.

ON Dec. 8th Professor Peter delivered his first lecture on Clinical Medicine at the Hôpital Necker before a crowded audience, composed of students and practitioners, selecting "The Clinical Aspect of Contemporary Medical Doctrines" as his subject. Sixty-seven years ago, said the lecturer, a weak, shy, and sickly man, alone in the hospital, without assistants or appliances, made a discovery that was to revolutionise the medical world. The man was Laennec; the discovery, mediate auscultation. Mediate percussion had been discovered towards the middle of the previous century by Avenbrugger, but it has passed unnoticed except for a curt mention by Stoll and Van Swieten, and remained unknown until the treatise of the Viennese physician was translated and commented on by Corvisart. Corvisart, the pupil of Avenbrugger and Morgagni, was the teacher of Laennec, and bent his mind in the direction of his subsequent inquiries, to which inquiries the medicine of to-day owes much of its precision. But precision in medicine is only possible for the recognition of the accomplished fact—that is, the physical change in living matter, the lesion and its signs. The *morbid act*, disease in its evolution, escapes precision; for the act, which is the *to become* is subordinate to the vitality of the affected organism, dependent upon the forces of the organism, and, like these forces, infinitely variable. Laennec definitely introduced into medicine pathological anatomy and semeiology, and showed the relationship between the symptoms and the lesion. He taught us to be localisers. To take, for example, pneumonia. The old doctrine of *febris peri-pneumonica* was set aside, and inflammation of the lung is treated as a local disease, of which the accompanying pyrexia is only a symptom. The *disease* in its pathological anatomy and physical signs is discussed at length, but the *patient*, as revealed in the general symptoms and the type of the malady, comes in for but scant consideration. From the stethoscope of Laennec have sprung numerous other instruments of precision; and thus we have the opthalmoscope, the laryngoscope, the otoscope, and the microscope, which, together with chemical analysis, enable us to make the necropsy, as it were, of the living body. From precision to prelesion, in the diseased organs we have sought the diseased tissue, and in the tissue the morbid element. It might have been thought that beyond this there was nothing, but this were to reckon without the microbe, the

universal cause of parasitic disease. For the new school the microbe is not the lesion, but its agent. For instance, pneumonia, the local inflammation of the lungs, is produced by the pneumococcus, but the pathogenic agent can only accomplish its mission by infecting the organism. Thus we have the work of Laennec upset by his followers, localisation *à outrance* leading to generalisation; and thus the histologists, become parasitists, have returned to the old idea of pneumonia, a general disease. The lecturer reminded his hearers that he had professed this opinion seventeen years ago, and that he had said in his clinical lectures, "The lesion is to the tissue what the symptoms are to the forces. The fever is the disease, of which the lung affection is a consequence; and as the type of the fever, whether inflammatory, nervous, or bilious, &c., varied, so should the treatment. We have not to do with pneumonias, but with pneumonic patients." M. Peter then alluded to Virchow's magnificent conceptions in cellular pathology, and his explanation of heterologous formations by heterochronism and heterotopism, and the final overthrow of these views by the discovery of the bacillus. For a time Koch was triumphant, but the supreme reign of the bacillus has not been long. It has been shown that the extent of the disease does not coincide with the quantity of the bacilli, and the partisans of these microorganisms now say, "It is not the bacillus that makes the disease, it causes it only indirectly by the secretion of a ptomaine." At the present time the whole of pathology is dominated by pathogeny, and this by bacteriology. Bacteria here, bacteria there, bacteria everywhere. Every day we learn with stupefaction that yet another disease is parasitical. As with pneumonia, so with rheumatism and malignant pustule. There are bacteria in the saliva, which are useful in the mouth, but morbiferous in the lungs, where they manufacture pneumonia. There are bacteria to make us feverish in typhoid, others to produce algidity in cholera; some blow hot, others cold. The lecturer passed on to the consideration of the treatments which these views have suggested, some considering that in typhoid the microbe gives rise to fermentation, and this to pyrexia. Hence the system of treatment by cold baths, which, although irrational as a general practice, has its applications in certain cases. It is the recognition of suitable cases, which we have learnt from the exclusive practice of Brandt, that forms a real progress. Others, always with an eye to the destruction of the morbiferous microbe, would make injections into the lung without considering that, if even one microbe alone were to escape, it would quickly reinfect the organism by its reproduction. We have learnt, however, that our patients have often a far greater power of resistance than might be imagined. A third therapeutic attempt was prompted by the observation that the cholera bacillus did not reproduce itself in a dry medium, and Koch in consequence advised the people of Marseilles to abstain from watering their streets. The microbic theories have led to attempts of medical antisepsis, but this, although well meant, is chimerical. In surgery the case is different. The patient is supposed to be a healthy man who has received an accidental injury; but in medicine disease already exists, and the enemy is in the stronghold. The anti-rabic inoculations are as well meant, but no less chimerical. Irrational in principle, they are inefficacious in practice. They are irrational, inasmuch as they are supposed, contrary to experience, to prevent the development of a disease in incubation, and holding the organism in its power. Vaccine has not this power over incubating variola, and when we seek to prevent the development of variola in an organism in which it is incubating by vaccination, we find that both appear at their appointed time and run their course simultaneously. These so-called anti-rabic inoculations, after having been proclaimed with *éclat*, have failed lamentably. The mortality has been the same in France this year, as in average years—namely, thirty deaths from hydrophobia, fourteen of which occurred in persons having undergone the preservative inoculations. Pathogeny, said M. Peter, in conclusion, is the romance of disease, and pathology is its general history. Study at the bedside teaches us the special history of the patient, and although our flights are less high than in questions of pathogeny, they are more fruitful.

THE FASTING MEN.

Since the appearance of my last letter on Merlatti my sphygmographic researches have met with less favour. The last time I offered to take a tracing of Merlatti's pulse it was pointed out to me that he was in a condition of irritability, which rendered the proposed examination undesirable. Contrary to my anticipations, the fiftieth day of the fast has been attained without serious accident. Yesterday there was some congestion about the head, which terminated with epistaxis. Merlatti is to break his fast at a public banquet to be held this evening. As to Succi, he has got half way through his allotted period, and does not appear to be any the worse for his abstinence.

TRANSPLANTATION.

M. Dubousquet recently related a case at the Biological Society in which he had used grafts from the epidermis of a frog to heal the ulcers resulting from severe burns on the foot caused by molten metal. For the sake of comparison one ulcer was treated with grafts taken from the patient's own skin, the other from that of the frog. In both cases four cuttings were applied, about the size of a half-franc piece each. Cicatrisation took place more rapidly in the ulcer treated with the skin of the frog, and the scar is more supple than the other.

HYDROCARBONS IN HYPODERMIC INJECTION.

Dr. Albin Meunier has made a communication to the Société des Sciences Médicales of Lyons, to which the *Semaine Médicale* calls attention, on the use of vaseline as a vehicle for the hypodermic injection of different essences. Eucalyptol, menthol, essence of cubebs, of sandal, of copaiba, and other substances may be so administered, without untoward symptoms. It is said that these injections give rise to no local troubles and very little pain. For the drugs mentioned one part in five of vaseline is used after filtration repeated three times. For thymol the proportion is one in ten. It has also been found that vaseline dissolves creasote, iodine, camphor, sulphide of carbon, carbolic acid, iodoform (when in previous solution with the essences), and even the alkaloids. For some of these the quantities given are as follows: iodoform, one to eighty; sulphide of carbon, one to fifteen; creasote, one to twenty; iodine, one to twenty; cocaine, one to fifty; digitaline, one to a thousand.

Paris, Dec. 15th.

EGYPT.

(From our own Correspondent.)

COCAINE FOR MORPHIOMANIA.

Two cases have recently been observed in Cairo of temporary hallucinations after prolonged subcutaneous use of cocaine, as recommended for abuse of morphia injections. The second case occurred in the person of a European doctor, and only lasted two days, during which it was believed that some harmless servants were persecuting him. It now appears that he was accustomed to take morphia injections himself, and was invited to take charge of the first case during his temporary restraint. This first case has been reported by a Greek, Dr. Comanos, in the *Berliner Klin. Wochenschrift* (No. 38), who watched the patient throughout. After being addicted to the morphia habit for several years he recommended his patient, a middle-aged European of excitable temperament, to take as a substitute three-quarters of a grain of cocaine, hypodermically, three times a day. The pain and distress occasioned by the lack of morphia were relieved by this, but the patient gradually and privately increased the dose until he took every day eight and even twelve grains. This induced great mental irritability, singing in the ears, dyspnœa, and hallucinations, which all disappeared upon returning to injections of morphia. But, unfortunately, a painful attack of herpes zoster ensued, and the patient doubled his former cocaine injections to sixteen and afterwards twenty-three grains a day. The symptoms produced by these large doses were trembling of the limbs, lassitude, incontinence of urine, loss of sleep and appetite, excitement, hallucinations, injected conjunctivæ, and a very fixed expression. He believed that burglars lurked in his garden, and he fired revolver shots at imaginary figures by night, eventually nearly strangling one of his servants because he believed he had swallowed a lantern. He was then removed to a hospital, and, on being searched, cocaine, morphia, and many hypodermic syringes were found on him. His drug treatment consisted of three-

quarters of a grain of morphia subcutaneously injected three times a day, and in forty-eight hours he was perfectly sane again, and prepared to explain away his hallucinations, especially those of sight and smell.

KASR-EL-AINI HOSPITAL.

The out-patient department, which has been taken over by Dr. Sandwith, continues to supply many interesting cases to the hospital, including those requiring surgical interference, in which the natives have great faith. During the last week, Dr. Milton removed a mass of strumous glands from the neck, excised a portion of the tunica vaginalis for chronic hydrocele, and amputated a breast for a fungating lobular tumour, which protruded entirely outside the skin. These cases were dressed with corrosive sublimate lotion, oiled paper next the wound, and then dry cotton-wool and bandage outside. Many cases of union by first intention have followed this simple dressing, and one of the cases shown to the students was a boy whose knee had been excised for strumous disease, and afterwards dressed in this way. Primary union followed, and in a fortnight the boy was on crutches, with his diseased leg kept off the ground by a high heel on the other foot. The following three operations have been done during the week by the native surgeons. A median perineal lithotomy in a man with chronic bladder disease, but without bilharzia; a supra-pubic lithotomy for a stone weighing 4·9 oz., this being the fourth similar operation which has lately been done by the same surgeon; and the removal of elephantiasis of the scrotum which had followed on an old urinary fistula. Upon the same day a long Guinea worm was extracted from the leg of a native who had lived some years in the Soudan, and stated that similar worms were common there, and often appeared near the genital parts of women. A Guinea worm had been extracted slowly from his other leg last year, but on the present occasion the whole worm was found lying coiled up in the cyst of a chronic fistulous tract. These worms are rare in Egypt.

EXPLOSION OF A SHELL.

Two days ago three British soldiers found an unexploded Krupp shell in the desert, and took it to the armourers' shop in barracks to see what was inside it. It will hardly be believed that they placed it in an anvil and struck it with a sledge-hammer, when it at once burst. One man's skull was badly fractured, with brain protruding, and he died instantly; another also died at once, having received a portion of the shell in his abdomen; and the third required amputation of one arm and one hip-joint, and died during the day. An unfortunate corporal, walking near, lost half his forearm; and a fifth man was bruised in the leg by a bit of the shell, which whistled by him. There are many stories of soldiers using heavy shells as garden-rollers and garden ornaments; and once, after the battle of Tel-el-Kebir, of men being found lighting a fire with a pile of shells to form the hearth.

Cairo, Oct. 29th.

ROYAL COLLEGE OF PHYSICIANS.

A COMITIA of the Fellows was held on Thursday, the 16th inst., Sir W. Jenner, Bart., President, in the chair. The copies of Harvey's "Prælectiones," suitably bound for presentation to Her Majesty the Queen and to His Royal Highness the Prince of Wales, were laid on the table by the President.

A communication from the General Medical Council respecting the length of the curriculum was referred to the Committee of Management. A report from this Committee was adopted.

The report of the Committee of Delegates (see page 1194) appointed by the Royal College of Physicians and the Royal College of Surgeons, to consider the desirability and practicability of granting degrees in medicine and surgery to persons who have passed the Conjoint Examinations of the two Colleges, was presented. Its adoption was moved by Dr. Wilson Fox and seconded by Dr. Handfield Jones. Dr. Allchin moved, and Dr. Norman Moore seconded, an amendment, stating that no scheme shall be deemed satisfactory unless it provide for the conferring of degrees by some University body outside the Colleges themselves, but on which they could be represented. Sir W. Gull urged that the degrees should be confined to clinical medicine and surgery, and he subsequently moved an amendment to that effect. Drs. Curnow, Wilson Fox, Chambers, and Quain also spoke, when the debate was adjourned on the motion of Sir H. Pitman, seconded by Sir G. Paget.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an extraordinary meeting of the Council of the above College, held on Thursday, the 16th inst., a report from the Delegates of the two Colleges on the expediency of granting the title of Doctor to the holders of the diplomas of the two Colleges was received. After a lengthened discussion certain verbal alterations were suggested, and the report was referred back for the further consideration of the Delegates.

Obituary.

NORMAN CHEVERS, C.I.E., M.D., F.R.C.S.,

DEPUTY SURGEON-GENERAL, BENGAL MEDICAL SERVICE.

ON Tuesday, Dec. 7th, 1886, a number of Indian medical officers, with other friends, assembled at Kensal-green to pay the last tribute of respect to a much-valued and deeply regretted brother officer, whose sudden and unexpected death (from cardiac failure) on Dec. 2nd had caused profound sorrow and surprise; for to observers generally he seemed but quite lately to be in good health, with the prospect of continuance of his valuable life for many years to come. Though he had not lived to attain the allotted duration of human life, having only reached his sixty-eighth year, Norman Chevers lived long enough to do work of an enduring nature such as falls to the lot of few to accomplish, whilst the tenour of his whole career has been, to those who knew him well, a striking illustration of a life lived and ruled by the highest principles. His was, indeed, a blameless and noble life—one in which commanding intellect and vast stores of learning of many and varied aspects were devoted to the advancement of knowledge, the relief of suffering, and the welfare of his fellow-men, especially of those of the great Indian Empire, in which his lot had been cast, his best work done, and his well-merited reputation acquired.

His early career, before proceeding to India in 1848, has been referred to by one who knew him well. He had even then acquired a marked reputation in pathology and medicine, and when he arrived in Bengal was somewhat older than was usual with newly-joined medical officers; but his matured powers and already large experience were soon brought into requisition for the duties of civil medical charge of the important stations of Chittagong and Howrah, and ere long in the very onerous and responsible post of secretary to the Bengal Medical Department. How well those duties were performed was shown by the fact that throughout the whole of the trying time of the Mutiny, when the medical, like other departments, was submitted to great strain, no failure took place in the Medical Department, which was administered by Forsyth and Chevers. But it was during his tenure of the important offices of officiating Inspector-General of Gaols, member of the Senate of Calcutta University, and in that of Principal of the Medical College of Bengal and Professor of Medicine, that the writer of this memoir became really acquainted and continually associated with him during many years of intimate co-operation as colleagues in those institutions, and thus had full opportunity of knowing the great worth and manifold excellencies of the accomplished medical officer whose loss is now deplored.

To no one is the British or native soldier, or the civil population generally, more indebted than to Chevers for the light he has thrown on, and the practical instructions he has laid down for guidance in reference to, those great sanitary

questions which so materially influence the health, and consequently the well-being, of all in India.

His able administration of the Medical College raised it to a high standard of efficiency; his teaching of medicine, hygiene, and other cognate subjects was of the greatest public benefit; whilst his writings are regarded as authority of the highest repute: such, for example, are his "Preservation of Health of Soldiers in India"; his "Removable and Mitigable causes of Death"; his great work on "Medical Jurisprudence in India," which won for him the Swiney Prize; that on "Diseases of the Pulmonary Artery" also his many admirable lectures and monographs on subjects directly or indirectly connected with public health; lastly, his work on Indian Diseases, which was completed only just before his lamented death. But it was not in medicine only that his powers were manifested; his acquaintance with literature, archæology, history, and art were equally remarkable, and delighted the friends with whom he conversed, an additional charm being communicated by the keen sense of humour which often found vent in the course of even his most impressive utterances. A fluent and graceful speaker, his addresses always attracted attention, and left a deep impression on those who heard them; no one could be long with him without feeling the influence of his well-stored and highly cultivated mind. But all this was perhaps the least attractive side of his character. It was the simple, loyal, chivalrous nature which charmed. He was incapable of anything mean. In all senses in which the word can be applied he was a gentleman. All he did was directed by a high sense of principle and honour. If he erred, it was not from lack of these guides; it might have been from an overestimate of their claims. He did what he thought was right, guided by that which to him was the highest light, and few men have come nearer to the mark aimed at than he did!

Chevers retired from the service in 1876 with the rank of Deputy Surgeon-General, and it was not until 1881 that Government, in recognition of his services, conferred on him the dignity of Companion of the Indian Empire. His labours were not, however, completed, for he was doing much good work up to the last; and he was making notes but a few hours before he died.

As President of the Epidemiological Society, he rendered further service to the subjects of epidemiology and disease, whilst his lectures and addresses on matters connected with sanitary science all betoken the unceasing interest and mental activity he continued to devote to these subjects. The crowning work of his life was his important "Treatise on Disease in India"—a book of great value, containing a comprehensive view of the whole subject of Indian disease. Other and fuller details of all he did, of the books he wrote, the appointments he filled, and the honours he held, will doubtless be given; it is needless, therefore, to dilate on them here, in a mere passing tribute to his worth, by one of many who knew him well and honoured him greatly. His memory will long be cherished, both in his service here and in the East, with affection and respect, and his name will live in their annals as a benefactor of India, and as one of the brightest ornaments of the old Indian Medical Service.

Medical News.

UNIVERSITY OF DURHAM.—At the recent examinations for degrees in Medicine and Surgery the following candidates satisfied the examiners:—

DOCTOR IN MEDICINE, FOR PRACTITIONERS OF FIFTEEN YEARS' STANDING.

Deans, John, M.R.C.S., L.S.A.
Denslloe, W. Le Gros, M.R.C.S., L.S.A., M.R.C.P. Ed.
Hardyman, C. E., F.R.C.S. Ed., L.S.A.
Hedley, John, M.R.C.S., L.S.A.
Smith, T. S., L.R.C.S. Ed., L.S.A.
Wood, T. Outterson, F.R.C.S.Ed., F.R.C.P. Ed.

DOCTOR IN MEDICINE (Essay).

Dixon, H. W., M.B., L.R.C.S.Ed.
Richards, G. W., M.B., M.R.C.S.
Rumboll, C. F., M.B., M.R.C.S.
Slater, W., M.B., L.R.C.S. Ed.

The Gold Medal for the best essay for the year 1886 was awarded to John Valentine Salvage, M.B., L.R.C.P., M.R.C.S.

BACHELOR IN MEDICINE.

Abbot-Anderson, W. Maurice.
Arnison, William Drewett.
Bradbury, Arnold Francis.
Cranstoun, George.
Crosby, Robert, M.R.C.S.
*Dalgliesh, John William.
Giddings, George Thomas.
Green, Arthur.
*Hadley, W. J., M.R.C.S., L.S.A.
Hewkley, Frank, M.R.C.S.
*Honey, Thomas Edward.
Howitt, George Grahamsley.
Jalland, R. Wallace, L.R.C.P., M.R.C.S., L.S.A.
Lansdale, William, M.R.C.S.
McInerney, T., L.K.Q.C.P.I., L.R.C.S.I.
Montague, A. J. Helm, L.R.C.P., M.R.C.S., L.S.A.
Orton, F. J. Johnson, M.R.C.S., L.S.A.
Packman, A. C. A., M.R.C.S.
Ramsay, Frank Winson, L.S.A.
Renney, Henry.
Robson, Robert Barker.
Robson, Tom Alfred.
Steele, William Frederick.
Winter, Frank.
Yeoman, William Metcalfe.

* Second-class Honours.

BACHELOR IN SURGERY.

Abbot-Anderson, W. M.
Arnison, W. D.
Balgent, William, M.B.
Blacker, A. B., M.B., M.R.C.S.
Bradbury, A. F.
Crosby, R., M.R.C.S.
Dalgliesh, J. W.
Dove, A. C., M.B., M.R.C.S.
Garrett, John Henry, M.B.
Openshaw, T. H., M.B., M.R.C.S.
Paige, Horace Bennett W., M.B.
Race, William, M.B.
Ramsay, F. W., L.S.A.
Renney, H.
Richardson, William G., M.B.
Robson, T. A.
Rumboll, C. F., M.B., M.R.C.S.
Steele, W. F.
Straughan, John, M.B.
Turnbull, William, M.B., L.S.A.
Winter, F.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following gentlemen, having passed the Fourth and Final Examination for the Letters Testimonial under the new scheme, have been admitted Licentiates:—

Samuel Boake, Patrick Thomas Bolger, Thomas N. Frood, William A. Kelly, Samson Hops Newland, Everard M. Power, Michael Lane Riordan, William John Scott, Thomas H. Strangman, William Joseph Taylor, Percival J. W. Ternan, and John Toppin.

The undermentioned gentlemen, having passed their Final Examination under the old scheme regulation, have been admitted Licentiates of the College:—

James H. Atkin, Thomas Bertram, James Butler, George J. Burke, Eugene Byrne, Patrick Carney, Charles Casey, Norbert Durrant, Richard L. Fitzgerald, Thomas Keough, James Joseph McGrath, Patrick Joseph Power, Edmund B. Russell, and Charles James Rutledge.

BEQUEST.—Mr. John Hunt has left £500 to the Adelaide Hospital, Dublin.

THE Hospital Saturday collection at Nottingham has been fixed for the 29th prox.

IT has been decided to hold on the 18th inst. a Hospital Saturday collection in aid of the Ilkeston Cottage Hospital.

PLANS have been accepted for the proposed General Hospital for Merthyr. The subscriptions and donations already promised amount to £3900.

VACCINATION GRANT.—Mr. R. Istance, Risca district, Newport (Mon.) Union, has received the Government grant for efficient vaccination in his district (seventh time).

SEAMEN'S HOSPITAL SOCIETY.—Sir Andrew Clark, Bart., M.D., will preside at the sixty-seventh annual court of this Society, to be held in February next.

AT a well-attended meeting of the Maidstone branch of the Kent Volunteer Medical Association recently held, it was unanimously resolved that the corps be put into uniform at once.

THE bazaar which was recently held at Manchester in aid of the extension fund of St. Mary's Hospital proved a gratifying success, a net sum of £420 having been paid to the account of the institution.

THE amount of the proceeds of Hospital Saturday, held a few weeks ago in Torquay and the neighbourhood, on behalf of the Torbay Hospital, has been ascertained to be £83.

ONE of the conductors of stores in the commissariat and transport corps has been poisoned by swallowing cyanide of potassium in mistake, as is supposed, for gin. The drug was kept, it seems, for the purpose of cleaning gold lace.

AT a meeting on the 14th inst. of the City Commission of Sewers, instructions were given that the Streets Committee report without delay on the subject of sinking artesian wells in the City with a view to supplying the inhabitants with water.

NEW GENERAL HOSPITAL FOR BOMBAY.—We understand that the Government of Bombay have just sanctioned the expenditure of ten lakhs of rupees for the erection of a new General Hospital for that city on the site of Fort St. George, recently demolished.

HOSPITAL SATURDAY AT WOLVERHAMPTON.—Last Saturday the collection for the Wolverhampton and Staffordshire General Hospital realised £1514 11*s.* 7*d.*; for the Eye Infirmary, £224.

THE COUNTESS OF DUFFERIN'S FUND.—The receipts in the Bombay Presidency towards this fund amounts now to 64,616 rupees, a sum large enough to indicate that the movement is gaining upon public sympathy and support.

ON the 8th inst., in consequence of the prevalence of rabies in the borough, the watch committee of the Nottingham town council passed regulations for the muzzling of dogs and the destruction of stray dogs and such as were not muzzled.

EIGHTEEN female medical students have been expelled from St. Petersburg for taking part in a meeting which had been forbidden by the police. The female medical school has long been considered a nursery of nihilists, and attempts have been made to close it altogether.

PERTHSHIRE MEDICAL ASSOCIATION.—The monthly meeting of this Association took place in the directors' room in the infirmary on Dec. 3rd. Dr. J. P. Bramwell, Perth, read a paper on "Hyper-arterial Tension," the discussion of which was adjourned till the next meeting.

SMALL-POX IN JAMAICA.—Advices received at Plymouth on the 12th inst. from the West Indies report that small-pox is raging furiously in Jamaica. On the departure of the mail there had been 1000 cases and 100 deaths, and 500 patients were under treatment.

THE PHARMACY ACT.—The Pharmaceutical Society of Great Britain on the 13th inst. obtained a verdict for £10 claimed as penalties from a person who had sold laudanum, and called himself a druggist when he was not registered as such, contrary to the provisions of the Pharmacy Act.

AT the final meeting of the Committee of the Exeter Hospital Saturday Fund on the 11th inst., it was reported that the total amount received was £471. The next collection will be held in the summer of next year, about the time of the celebration of the Queen's Jubilee.

CHOLERA IN CALCUTTA.—We learn from an Indian contemporary that cholera has been epidemic in Calcutta. During the week ending October 30th there were registered 73 deaths, against 63 and 98 in the preceding two weeks. The number, we learn, is higher than the average of the past quinquennium by 49. Recent advices, however, report a diminution of the outbreak.

INTERNATIONAL HEALTH CONGRESS.—This congress, which is to be held in Vienna in September of next year, promises to be successful. The Hereditary Prince of Austria, Crown Prince Rudolphus, has consented to act as the patron of the congress, and the Chief of the Cabinet, Count Traffe, has been chosen as honorary president. The committee, with Hofrath Schneider at its head, is working energetically.

POISONED BY TINNED SALMON.—Three members of a family at Great Bowden, having last week partaken of tinned salmon for supper, symptoms of poisoning were soon afterwards manifested, all being seized with cramp and vomiting. Dr. Lee, of Market Harborough, was summoned, and antidotes were administered, and the sufferers were eventually relieved. A cat, to which a small portion of the salmon was given, showed like symptoms.

DORSET COUNTY LUNATIC ASYLUM.—At a meeting of the Cerne Board of Guardians on the 8th inst., it was unanimously resolved that the authorities having control over the superannuation allowance of the relieving medical superintendent of this asylum be memorialised to recommend that only a minimum pension be granted. The Visiting Committee of the institution have recommended that the allowance should be £600 per annum.

HOSPITALS ASSOCIATION.—On the 15th inst. Sir William Mac Cormac presided at a meeting of this Association, when a paper on "Foundling Hospitals at Home and Abroad" was read by Mr. Samuel Osborn, F.R.C.S., who confined his observations on foreign hospitals almost entirely to those of St. Petersburg and Moscow, which he visited this year, and concluded by giving a detailed account of the institution in Guildford-street. A short discussion followed the reading of the paper.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BARENDT, FRANK H., M.R.C.S., L.R.C.P.Lond., has been appointed Senior House-Surgeon to the Bootle Borough Hospital.

BLUMER, G. ALDER, M.D., L.R.C.P., L.R.C.S.Ed., has been appointed Medical Superintendent to the State Lunatic Asylum, Utica, New York, U.S.A., vice John P. Gray, M.D., LL.D., deceased.

COCKING, W. T., M.B.Lond., has been appointed Obstetric Assistant to University College Hospital.

HOUGHTON, F. E. CAULFEILD, M.R.C.S., L.R.C.P.Ed., has been appointed Surgeon to the Royal Small Arms Factory, Birmingham, vice Popham, resigned.

HUGHES, S., M.B., C.M.Edin., M.R.C.S., L.S.A., late House-Surgeon to the Royal Infirmary, Liverpool, has been appointed Senior House-Surgeon to the Borough Hospital, Birkenhead, vice Richardson, resigned.

KERR, DANIEL O., M.B., C.M.Ed., has been appointed Medical Officer for the Keelby District of the Caistor Union.

KEYWORTH, ARTHUR P., L.K.Q.C.P.I., L.M., has been appointed Medical Officer to the Manchester, Sheffield, and Lincolnshire Railway Mutual Provident Society for the Marple and Hayfield District, vice John Howe, M.R.C.S., L.S.A., deceased.

KINSEY-MORGAN, A., M.R.C.S., L.S.A., has been appointed Medical Officer of Health for Bournemouth.

MANTON, J. L., M.R.C.S., L.R.C.P.Lond., has been appointed Assistant Medical Officer to the Nottingham Friendly societies' Medical Institution.

MARRIOTT, HYDE, B.Sc.Lond., M.R.C.S., has been appointed Obstetric Assistant to University College Hospital.

MUGFORD, SIDNEY A., M.R.C.S., L.R.C.P.Lond., has been appointed Resident Medical Officer to the Kensington Dispensary, vice Buck, resigned.

RODGERS, J. H., L.R.C.P., L.R.C.S., has been appointed Resident Medical Officer to the Nottingham Friendly Societies' Medical Institution.

WARD, J. O., M.R.C.S., L.S.A., has been appointed Medical Officer to the Fourth District of the Pontefract Union.

WILKINSON, GEORGE T., L.R.C.S.I., L.R.C.P.Ed., has been appointed Assistant Rural Medical Officer for the Scalby District of the Scarborough Union.

Births, Marriages, and Deaths.

BIRTHS.

CHAMBERS.—On the 7th inst., at Amwell-street, E.C., the wife of E. Chambers, M.B., of a daughter.

COCKERILL.—On the 8th inst., at Netley Abbey, Southampton, the wife of John W. Cockerill, Army Medical Staff, of a daughter.

GILBERTSON.—On the 9th inst., at The Limes, Hitchin, the wife of James Henry Gilbertson, L.R.C.P.Lond., M.R.C.S., of a son.

INMAN.—On the 14th inst., at Hackney-road, E., the wife of R. E. Inman, M.R.C.S., of a daughter.

OPIE.—On the 8th inst., at Hartington-villas, Beckenham, Kent, the wife of Edward A. Opie, M.B., of a son.

MARRIAGES.

ANDERSON—MOON.—On the 8th inst., at Edenfield, Cupar, Fifeshire, Alexander M. Anderson, M.D., of Dundee, to Margaret Robertson, eldest daughter of the late William Moon, J.P., and of Mrs. Moon, of Edenfield.

KNOWLES—LONG.—On the 30th ult., at St. James's, Southbroom, Devizes, John Knowles, M.R.C.S., of Maidstone, to Annie Ada, daughter of William Long, of Devizes.

WALKER—MOXON.—On the 14th inst., at St. Giles', Northampton, by the Rev. John Brooke, Vicar of St. Katharine's, assisted by the Rev. R. A. White, Vicar of St. Giles', Norman Hendrie Walker, M.B., of Stalham, Norfolk, to Florence Katharine, eldest daughter of William Moxon, M.R.C.S., of Derngate, Northampton.

DEATHS.

BURY.—On the 9th inst., at his residence, Whetstone, N., George Bury, F.R.C.S.Eng., aged 77.

CATTLIN.—On the 13th ult., at Glendale, Surrey-road, Bournemouth, William Alfred Newman Cattlin, F.R.C.S.E. (Friends will kindly accept this intimation.)

DAVIES.—On the 8th inst., at Borrowsop, Lichfield, Robert Alexander Davies, M.D., formerly Medical Superintendent of Burntwood Asylum, co. Stafford.

FERGUS.—On the 8th inst., at Ryton-on-Tyne, Walter Fergus, M.D., M.R.C.S., late Medical Officer at Marlborough College.

GREAVES.—On the 10th inst., at Burton-on-Trent, George Greaves, L.S.A., in his 82nd year.

WATSON.—On the 13th inst., at Woodside-terrace, Glasgow, Eben. Watson, M.D.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, December 16th, 1886.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Dec. 10	29·22	N.W.	37	36	...	45	35	·07	Overcast
,, 11	29·46	S.W.	45	44	...	52	36	·03	Overcast
,, 12	29·33	W.	47	46	...	49	43	·10	Cloudy
,, 13	29·73	W.	46	44	...	47	43	...	Overcast
,, 14	29·54	E.	43	41	...	49	41	·06	Overcast
,, 15	29·11	S.W.	42	42	...	47	41	·67	Cloudy
,, 16	29·39	W.	41	39	...	...	39	·02	Foggy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

THE ABERDEEN CHAIR OF MATERIA MEDICA.

A CORRESPONDENT—graduate of Aberdeen—is somewhat surprised at receiving a circular from a number of gentlemen asking for the expression of approval of Dr. Bridger's candidature for the chair of Materia Medica in Aberdeen University. The appointment is in the gift of the Crown, and our correspondent evidently thinks it a somewhat bold thing to think of influencing the Crown. But in actual practice the Crown is not so inaccessible nor so independent of information as he seems to think. In the contest for Crown chairs, though we see no objection to any fair pressure of any man's claims, we should deprecate general and promiscuous appeals to the profession.

Mr. Ways (Millom).—There are so many good books on hygiene that selection is difficult and advice invidious. The well-known works of Parkes, Wynter Blyth, Cornelius Fox, Wanklyn, Frankland, Bell, and Hassall would all be useful to our correspondent, and others might be mentioned.

J. R. I. R.—Our correspondent would do well to forward the advertisement to the Royal College of Surgeons, from whom the diploma has been obtained, in virtue of which registration is claimed. There is nothing in the announcement absolutely to show that the surgeon was the author of it.

Mr. F. W. Gibbon, L.R.C.P.Ed., L.S.A.Lond., &c.—We have no knowledge of any proposed establishment of pupilage in the medical curriculum.

Dr. Popow.—We cannot exchange.

FRIENDLY SOCIETIES AND THEIR MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—If you will kindly insert the following lines some of your readers may be able to tell me the rights of this question.

I have been surgeon to a Court of Foresters for more than ten years. A man, who was a member before I became the surgeon, has during the whole of my tenure of the appointment lived out of the district and paid his doctor's contribution to the surgeon of a court elsewhere. Having been ill for some months he now returns to his native place and expects to have my attendance, though he has never paid the usual contribution to me. He would of course during residence in the district pay like the others to the proper court surgeon (myself), but I, in a wholly amicable way, object to be responsible for him, as he is likely to be on the books for some time. Am I responsible?

I am, Sir, yours faithfully,

Dec. 14th, 1886. R.

MEDICINAL PRODUCTS OF AFGHANISTAN.

A PAPER was read on the 8th inst. before the Pharmaceutical Society of Great Britain by Dr. Aitchison, C.I.E., F.R.S., late naturalist with the Afghan Delimitation Commission, upon "Some Plants of Afghanistan, and their Medicinal Products." It appears that in Afghanistan umbelliferous plants form the characteristic type of the vegetation, the country in which they flourish consisting of great shingle and conglomerate plains lying between hills and river beds. Only about 1 out of 100 plants bear a flowering stem, and a native will assert that such a flower-bearing plant has nothing to do with the plants that yield asafœtida. The Dorema ammoniacum grows along with the asafœtida plant, and is equally abundant. Dr. Aitchison also describes as a new species (Ferula suaveolens, Aitch. and Helmsley) a plant the scented root of which, under the name of "sambal," is exported through Persia to the coast. Several kinds of manna are also produced, which are largely eaten by the people as a sweetmeat and exported in quantity to Persia and India. Among other plants and plant products met with by Dr. Aitchison were a very handsome species of Rheum, the ripe fruit of which is used by the natives as a purgative, and Orchis latifolia (Linn.), the dried tubes of which are known as "salep."

Dr. R. Neale.—The transliteration of Russian words and names into Roman characters is carried out under numerous systems, and often puzzles highly educated Russians themselves. The system adopted in THE LANCET, when referring to an author who writes in Russian, is much the same as that employed in the catalogue of the British Museum. When, however, reference is made to quotations from Russian authors in French or German publications the orthography employed in the latter is usually retained. Thus, taking the name mentioned by our correspondent, Cheltsoff or Tschelzoff, the Russian letter *che*, which has the sound of the *ch* in *change*, has to be written *tsch* in German, and *tch* in French, as *ch* in those languages would convey erroneous impressions of the sound. Again, the *ts* is equivalent to the German *z*, but not to the English or French *z*. It is the initial letter of the well-known word "Czar," or "Tsar." All this, as well as a great deal more, which would require a long essay to discuss, makes the compilation of an index containing Russian names a very difficult matter, which may be illustrated by the annoyances caused by the numerous ways of spelling and cataloguing the names of Indian towns.

M.R.C.S., L.R.C.P.—Our correspondent may with advantage refer to THE LANCET of April 18th, 1885, p. 735.

CASEINE IN HUMAN MILK.

To the Editor of THE LANCET.

SIR,—In view of the recent discussion upon infant feeding which has been carried on in your columns, may I be allowed to draw attention to the question, How much caseine is contained in human milk? Now, without mentioning earlier writings, I find that Dr. Eustace Smith, Dr. Goodhart, and Dr. Galabin, all of whose text-books are very modern, agree in accepting (or, at any rate, in offering for their readers' acceptance) analyses which represent human milk as containing from 3 to 4 per cent. of caseine. On turning, however, to the chapter on Food in Drs. Meigs and Pepper's work on the Diseases of Children I find that these authors reject as untrustworthy all such analyses, and accept as substantially correct an analysis which gives 1·5 per cent. of caseine. In support of this preference they quote Dr. A. Meigs, who declares that no specimen of human milk which he had examined contained so much as 2 per cent. of caseine. Other analyses giving very similar results are quoted by Dr. Ashby in an article in the *Medical Chronicle* for May in the present year. The question whether the older analyses, which are still current even in the most recently issued text-books, or the newer analyses to which I have here alluded, are correct is one of great practical importance. For, however fully we may believe that clinical experience counts for more than chemistry, we cannot afford to neglect any aid which may be derived from analysis when we set ourselves to produce with the use of cow's milk an imitation of an infant's natural diet. For example, when the question of the appropriate degree of dilution for cow's milk is under consideration, are we to take it as true that human milk contains more than 3 or less than 2 per cent. of caseine? If the more recent analyses are to be received, is it not time that they should be finding their way into English text-books?

I am, Sir, yours truly,

Dec. 7th, 1886. R. J. R.

RELIGIOUS RESTRICTIONS ON A NEW MEDICAL SCHOLARSHIP.

A SUBSCRIPTION amounting to £400 has been raised by the colleagues and admirers of Prof. Karavayeff, the eminent Kieff surgeon, for the purpose of founding a scholarship in his honour for students in the medical faculty. It appears, however, that candidates must be of the "orthodox" faith; so that Lutherans, Dissenters, and Jews are debarred the chance of obtaining either the honour or emolument attaching to the possession of a Karavayeff scholarship.

Mr. W. Curran.—Yes.

ROYAL UNIVERSITY WORK IN IRELAND.

Audi alteram partem is thanked for his letter, though it is too long for insertion. He vindicates the work of the Royal University. He admits it is not perfect, owing to lack of properly equipped laboratories and some defects of method, but thinks it is, on the whole, worthy of encouragement. He praises especially the Arts Examination, which, he says, is as good as Cambridge, requiring a good honest year's work, and alleges that the medical curriculum is improved in many respects—viz., the enforcement of adequate study of lunacy, fever, gynæcology, and ophthalmology, following in this respect the example of all progressive institutions here and on the Continent.

Mr. H. H. Sturge.—There is no publisher's name on the title-page. Our correspondent had better write to the author of the pamphlet.

HOSPITAL APPOINTMENTS.

To the Editor of THE LANCET.

SIR,—I am pleased to find that in your issue of Dec. 11th your powerful voice has been raised in protest against the monopoly at present existing in hospital appointments. Your remarks upon hospital appointments and degrees in surgery apply with even greater force to medical degrees and appointments; though I am afraid that in neither case is your suggested remedy of "addressing the bodies whose licentiates and graduates are injured" practicable, or at all likely to lead to any good result. The Fellows and Members of these same bodies are themselves either directly or indirectly interested in maintaining the *status quo*. The value of their diplomas is distinctly enhanced by the privileges they carry of rendering their happy possessors alone capable of applying for hospital appointments, and as they form the governing power of the bodies in question, it can hardly be expected that they will be very active in the matter. To a certain extent members of the College of Surgeons are in a much better position in this respect than the licentiates of the College of Physicians. In the former case any Member on passing the required examination is admitted to the Fellowship without let or hindrance; in the latter, not only must an examination be passed, but such restrictions are placed upon the would-be members as practically to render the diploma untenable except by those whose means are to a greater or less extent independent of the practice of their profession I need hardly point out in detail how injuriously such a system acts, not only upon the profession itself, but also upon the public at large, closing as it does the door of professional advancement upon a body of highly-trained and experienced members of the profession, who from want of means or some similar cause, not from want of ability, are effectually precluded from competing with their more favoured brethren.

I am, Sir, yours obediently,

Dec. 13th, 1886. REFORM.

SIR WM. MACCORMAC'S CASES OF RUPTURED BLADDER.

In the account of the cases of ruptured bladder under the care of Sir William Mac Cormac which was published in our last issue, on page 1118, paragraph 2, line 4, the date should be 1883, not, as printed, 1885. The two cases were admitted during Sir William's two consecutive "taking in" weeks, rare cases not infrequently occurring in pairs. The second patient, we may add, is perfectly well and shortly about to resume his occupation. Each man was provided with a fitted abdominal support to prevent any yielding along the line of cicatrix and the formation of ventral hernia.

Mr. C. S. Jeaffreson (Newcastle-on-Tyne).—Yes, if not too long.

TRIPLETS.

To the Editor of THE LANCET.

SIR,—The following case seems of some interest.

MRS. C——, wife of the gardener of this hospital, was delivered of triplets on Sept. 10th last. The children were all males. There were three amniotic sacs and three placentæ, two of which were slightly attached. The first child and also the last presented by the shoulder; the second was a face presentation. The children were small and feeble. One died twenty-four hours after birth; another lived three days; the third lived seven days.—I am, Sir, yours faithfully,

M. JOHNSTON, House-Surgeon.

County Hospital, Lincoln, Nov. 17th, 1886.

RECTAL MEDICATION.

Dr. C. F. Knight (Dublin) calls our attention to the fact that he sent to us in 1878 a communication regarding "Medication per Rectum," in 1880 a second, and in 1883 a third communication on the same subject, but under the above heading. In these articles he advocated the administration of certain therapeutic agents in the form of vapours in particular diseases, as cholera, fevers, phthisis, &c. In 1883 he devised an instrument for such medication, and the method is, he understands, now followed at many of the continental hospitals, and has still more recently been introduced into one or two London hospitals. (See THE LANCET, Aug. 7th, 1886.)

X. Y. Z.—We cannot reply with certainty, but should advise our correspondent to ask the authority in charge of the failure for a direction for payment in full.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE following were the questions on Anatomy submitted to the candidates at the first examination for the diploma of Fellow of the College on the 19th ult., when they were required to answer at least three of the four questions between 11 A.M. and 2 P.M.:—

1. Describe the soft palate; and (*a*) mention in their order, from above downwards, the several structures met with in its dissection; (*b*) state the sources of its arterial and sensory nerve-supply; (*c*) give the extrinsic attachments and the motor-nerve of each muscle.
2. Give the origin, course, and distribution of the branches of artery supplying the various parts of the brain and its membranes.
3. Describe the position and shape of the first rib. Give its relations and the muscular and ligamentous attachments to it. How is it developed?
4. Describe fully the levator ani muscle, giving its relations and nerve-supply.

The following were the questions on Physiology, of which it was necessary to answer three of the four between 3 and 6 P.M.:—

1. Name the proteïds which occur in the human organism. State their general properties, and the special characteristics by which the different varieties may be distinguished.
2. Explain the effect upon the blood, blood-pressure, and excretions of diminishing the volume of the blood by bleeding, and of increasing it by the transfusion of normal living and of whipped blood.
3. What is meant by the cortical motor centres, and in what region of the brain are they situated? What do you know by experiment or otherwise of their use?
4. Describe the mode of origin and state the destination of the Wolffian and Müllerian ducts.

The following were the questions on Pathology, Therapeutics, and Surgery submitted to the candidates at the second examination for the diploma of Fellow on the 24th ult., when all four questions had to be answered between 1.30 and 5.30 P.M.:—

1. Describe, and contrast clinically and pathologically, the conditions known as (*a*) pulpy degeneration of synovial membrane, (*b*) Charcot's joint-disease, (*c*) chronic rheumatoid arthritis.
2. Give the symptoms, diagnosis, and treatment of tetanus, and discuss the causes and pathology of the disease.
3. Give the pathology, symptoms, and treatment, general and operative, of malignant disease of the rectum.
4. Describe the various forms of gangrene of the lower extremity, and state fully the treatment appropriate to each.

Mr. T. Laffan.—We have no knowledge of any prize for an essay on Diphtheria save that given by the Empress of Germany some three or four years ago.

Messrs. J. & A. Churchill.—Dr. D. Pi y Molist's work on "Don Quixote from a Medical Point of View" could probably be obtained from "La Redaccion de la Independencia Médica, Carmen 34, Barcelona."

PERSISTENT DIARRHŒA.

To the Editor of THE LANCET.

SIR,—May I be permitted to ask for advice through your columns in the treatment of the following case.

I was consulted a few weeks ago by a young lady who looked the picture of health, but who complained that for the last two years she had continually suffered from diarrhœa, accompanied by considerable griping pain in the abdomen. The causes which seem to have produced the diarrhœa were any deviation from the most simple diet and excitement. For two years she had scarcely tasted vegetables, and whenever she had done so she suffered from pain and diarrhœa. She stated that potato, even in small quantities, produced as unpleasant effects as anything. When going to a dance or dinner party she invariably suffered pain, and frequently had to return home on account of diarrhœa coming on. She had been under treatment by another practitioner for some time, and had always kept a mixture containing chlorodyne in the house, a dose of which she had taken whenever she was going out to any entertainment likely to cause the diarrhœa. I commenced treating her with ten grains of bromide of potassium and five minims of tincture of belladonna three times a day, and after a few days increased the dose of bromide to twenty grains. The only apparent effect of this was that she complained of feeling very low-spirited. After about ten days of this treatment I discontinued the bromide and belladonna, and ordered her mineral acids and nux vomica. I also advised her to commence trying to eat very small quantities of well-cooked floury potato with her food, and to have a cold sponge-bath every morning. She now feels very well, except that she has pain and looseness of the bowels after the potato, as before. There is thoroughly good reaction after the cold bath. Her friends tell me that she has never shown any symptoms of hysteria, nor does she appear to be hysterical. Her manner is always quiet and self-possessed. She is naturally very anxious to get rid of the constant discomfort and annoyance, and I am unwilling that she should continue the practice of taking opiates and avoiding vegetables. I shall be very thankful for any suggestions in the treatment of this case.

I am, Sir, yours truly,

Dec. 14th, 1886. A. H.

LIFE ASSURANCE.

WE quite agree with the opinion expressed in a leader of the last issue of the *Policyholder*, that parents could not spend money to greater advantage upon their sons than by insuring their lives when they had reached about fifteen years of age. Such policies would be sure to be kept up, and would prove of great value either as a family provision or to meet business requirements.

Mr. Browning.—The matter is discussed in our current number.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Dyce Duckworth, London; Mr. Teale, Leeds; Sir J. Paget, London; Mr. O. Pemberton, Birmingham; Mr. W. S. Savory, London; Dr. Grally Hewitt, London; Prof. Annandale, Edinburgh; Mr. J. E. Erichsen, London; Sir Wm. Stokes, Dublin; Dr. John Ince; Dr. Braxton Hicks, London; Prof. Humphry, Cambridge; Sir James Sawyer, Birmingham; Mr. M. Gamgee, Birmingham; Prof. Rutherford, Edinburgh; Dr. Thursfield, Shrewsbury; Dr. Collins, London; Dr. M'Kenzie Davidson, Aberdeen; Mr. T. W. Crosse, Norwich; Mr. J. Thompson; Mr. Cantlie; Dr. Allchin; Dr. J. W. Fraser; Dr. D. Hood, London; Sir J. Fayrer, London; Dr. Harries, London; Dr. Cosgrave; Dr. Wilson Fox, London; Dr. Newell, Macclesfield; Mr. R. Boyd; Mr. H. Percy Dunn, London; Mr. W. Rivington, London; Mr. Trinder, Burton-on-Trent; Mr. A. Neve, Kashmir; Mr. Waye, Millom; Mr. A. F. Clay, Birmingham; Dr. Auld, Wick; Mr. Newnham, Bristol; Dr. John Lucas; Mr. F. Sherlock, London; Mr. Shelswell, London; Mr. R. R. Dale, London; Mr. S. Snell, Sheffield; Dr. Buzzard, London; Dr R. Neale, London; Mr. Paul Swain, Plymouth; Dr. Cameron, Liverpool; Mr. T. B. Crosby, London; Mr. Bradden, Lewes; Dr. Grainger Stewart, Edinburgh; Dr. Allfrey, Rowlands; Mr. J. Harris, Leighton Buzzard; Mr. Liebwood, London; Mr. Williams; Messrs. Bullock and Co., London; Mr. Byles, Eccleshall; Mr. Middleton; Mr. Greig Smith, Bristol; Dr. Jacob, Leeds; Mr. Fuge, Taunton; Mr. Sydney Jones, London; Dr. Vanderstraaten, Colombo; Messrs. Bogie and Co., Texas; Mr. Pillay, Madras; Mr. F. O. Smith, London; Dr. Oscar Jennings, Paris; Dr. C. F. Knight, Dublin; Dr. T. W. Hime, Bradford; Dr. Alexander, Liverpool; Dr. Hicks, Hendon; Mr. Tanner, Harrogate; Mr. Kilham, Sheffield; Mr. Winsor, Exeter; Dr. Smellie, Glasgow; Mr. Twyford, Hanley; Mr. Cripps, London; Messrs. Harris and Co., Birmingham; Dr. Popow, St. Petersburg; Mr. Whitehurst, Burton-on-Trent; Dr. Browne, Belfast; Mr. Shaw, St. Leonards-on-Sea; Mr. Oldham, Monsall; Mr. Mackay, Edinburgh; Mr. Lomas, Edinburgh; Dr. McNab, Stirling; Mr. Proctor, Shifnal; Mr. Taylor, Leicester; Dr. Caulfield, Cork; Mr. Keetley, London; Mr. C. F. Goode, London; Mr. A. J. Ellis, London; Messrs. Ettlinger and Co., London; Messrs. Farwig and Co., London; Mr. Naylor, London; Mr. J. Chisholm; Mr. H. Fiennell; Fairplay; R. D.; A Grumbler; Lady Superintendent, Southend-on-Sea; J. B.; A Student of Medicine; P. H. W.; J. E. I. R.; A. H.; Reform; L. S. A.; A Provincial Fellow; *Æ.*

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Dawson, Southbourne-on-Sea; Mr. Atkinson, Madley; Mr. Sheppard, Sutton Bonnington; Mr. Wills, Crewkerne; Mrs. Corwen; Messrs. Hill and Co., Hull; Mr. Skrimshire, Abergavenny; Messrs. Hopkinson and Co., Notts; Mr. Wootton, Leeds; Dr. Price, Nellore; Mr. Trubshaw, Mold; Mr. Keeley, Notts; Miss Hart, Painswick; Mr. Woodcock, Old Trafford; Dr. Horne, Scarboro'; Mr. Evans, Chelsea; Messrs. Clubbe and Co., Lowestoft; Mrs. Hitch, St. Leonards; Mr. Chadwick, Llansaintffraid; Mr. Turner, Finsbury; Mr. Miller, London; Mr. Joslen, Workington; Mr. Robson, Leeds; Mr. Milner, Dalston; Mr. Gallaher, West Leigh; Mr. Barton, South Kensington; W. B. B., Manchester; Trebor; G. A. M., Guernsey; Matron, Dorchester; S.W.; H., Ramsgate; W. M.; Dr.; C. D., Preston; Z.; Alpha, Glamorgan; Omega, Brighton; Matron, Preston.

Weston-super-Mare Gazette, Manchester Examiner, Preston Herald, The Coral, The Sanitary Engineer, &c., have been received.

Medical Diary for the ensuing Week.

Monday, December 20.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesdays, same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Dr. Ord: Hypertrophic Cervical Pachymeningitis.—Dr. Orwin: (1) Lupus of Larynx; (2) Hereditary Specific Disease of the Tongue.—Mr. Marmaduke Sheild: Ulcer of Face.—Mr. Bull: Enlargement of Thigh in a Boy.—Mr. Noble Smith: Club-foot. And other cases.

Tuesday, December 21.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour.
Ophthalmic Operations on Mondays at 1.30 and Thursdays at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 3.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3.30 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Hale White: Ulceration and Endocarditis of the Right Side of Heart.—Dr. Pasteur: Syphiloma of Heart.—Dr. A. Money: Rare Aneurysm of Undefended Space.—Dr. Handford: Fatty Tumour of Heart.—Dr. Hadden: Fatal cases of Alcoholic Paralysis.—Dr. Barlow: Ulcers of Stomach in case of Tuberculosis.—Mr. Bruce Clarke: Epithelioma of Bladder.—Mr. Swinford Edwards: Tumours of Testis and of Spermatic Cord. Card Specimens by Mr. S. Paget, Dr. Handford, and Mr. Shattock.

Wednesday, December 22.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesdays and Thursdays, 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Skin Department, Mondays and Thursdays, 9.30 A.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; and on Friday, 2 P.M.; and Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, December 23.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Surgical Consultations, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, December 24.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1.30 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, December 25.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin Paris.

ABSTRACT OF THE

Brown Lectures.

Delivered at the University of London,

BY VICTOR HORSLEY, F.R.C.S., F.R.S.

EPILEPSY.

LECTURE III.

MR. VICTOR HORSLEY said that he intended to give in detail an account of recent experimental research into the nature and pathology of epilepsy. The first of the three lectures was devoted to classification, and he proposed only to deal with epilepsy so far as it could be studied experimentally, though the results of experimental science had been somewhat ridiculed by clinical physicians. Experimental results were, however, infinitely more exact than those of clinical observation. A passage from Dr. Gowers' work on Epilepsy and other Chronic Convulsive Disorders, quoting Dr. Russell Reynolds, was read to show that the experimental work had been dragged into a false position. The lecturer next asked the question, "What do we mean by epilepsy?" and proceeded to give the classifications in vogue. Dr. Hughlings Jackson distinguished epilepsia gravior, epilepsy from discharges in the bulb and pons, and epileptiform seizures (Jacksonian Epilepsy). Dr. Russell Reynolds divided epilepsia gravior into those cases with loss and those without loss of consciousness, and also divided epilepsia mitior into those with and those without spasm. Dr. Gowers and Dr. Ross described as functional epilepsia gravior and mitior, and as organic epileptiform seizures. It was customary to consider hystero-epilepsy, epileptiform seizures, laryngismus stridulus, and eclampsia as altogether apart from epilepsy. Mr. Horsley thought that the omission to consider these diseases or conditions under epilepsy was unwarrantable. Experimental research showed that epilepsy could originate from discharges in the motor cortex of the brain and from discharges in the bulbo-spinal centres. For the present the hypothesis of Nothnagel, that there existed a special convulsive centre in the bulb and pons, as well as the views of others as to the convulsive centre of the bulb alone, must be set aside. Ferrier believes that movements may be evoked by stimulation of the corpus striatum, but Mr. Horsley had been unable to corroborate this. Nothnagel, in Ziemssen's Cyclopædia, in one and the same sentence, allows that the same mechanism in the brain may produce both epileptiform seizures and epileptic convulsions. This confusion of terminology must always remain until an exact division of symptoms is arrived at, and this coupled with an exact anatomical knowledge of the locality where the discharge begins and its mode of spread. The two essentials of epilepsy, according to Dr. Russell Reynolds, were diminution of intelligence and muscular spasm. An anatomical classification of epilepsy demands that we should know the locality of origin of disturbance, the locality of source of spasm, and the locality of the whole disturbance, which may or may not be the whole of the central nervous system. The disturbance might begin in any part of the encephalon, and, if in the perceptive centres, would readily explain the affection of intelligence. The next possible anatomical means of classification was in determining the locality of the source of spasm. Experimental stimulation of the motor cerebral cortex gave rise to definite movements, for in this region the representation of movement was, so far as is known, the most localised. Epilepsy induced from the cortex of the brain was characterised by tonic spasm followed by clonic spasm, as in epilepsia gravior. Epilepsy excited from bulbo-spinal centres was generally simply tonic, but might be clonic; the sequence of clonic on tonic was wanting. Tetanus and ankle clonus were of bulbo-spinal source, and possibly laryngismus also. Hystero-epilepsy was probably a cortical disease, as epileptiform seizures dependent on organic lesions undoubtedly were. Possibly eclampsia, epilepsia mitior, and laryngismus stridulus were of cortical origin. Mr. Horsley and Dr. Semon have discovered cortical centres for the adductor action of the vocal cords. It must remain doubtful whether tumours of the pons cause epilepsy by discharging a local mechanism (Nothnagel). The spasms in hystero-epilepsy at the onset of the attack were of the tonic followed by the clonic character, as graphic records showed. This fact, together with the remarkable coördinated movements in the later stage, were sufficient to prove hystero-epilepsy to be, at least primarily, a cortical affection.

LECTURE IV.

The second lecture on epilepsy was devoted to the question of the existence of special convulsive centres either in the pons Varolii or medulla oblongata. Mr. Horsley gave a detailed account of the various investigations, and showed that neither taken singly nor collectively could the results of these experiments be accepted as proving the existence of special convulsive centres. Such a hypothesis as that of Nothnagel and others was entirely unnecessary, for all the ascertained facts could be perfectly and harmoniously interpreted without it. Mr. Horsley believes that all the convulsive, tonic and clonic, phenomena may originate from the ordinary bulbo-spinal centres such as exist for carrying out normal mechanisms. Tonic or clonic spasm, then, may be produced by any motor nerve centre, but the combination and sequence of tonic-clonic could originate only from the cerebral motor cortex. It was an interesting and important but unsolved problem whether the clonic spasm of cortical epilepsy was the effect of cortical or bulbo-spinal discharges. Conceivably the cortical centre may discharge the energy pent up in the bulbo-spinal centre, but the violent rush of energy from the cortex might be simply passed along by the bulbo-spinal centre, which thus would act as a mere conductor. The tonic spasm resulting from cortical stimulation was a tetanus compounded of a series of muscular contractions, which, though fused in the tetanus, could yet be seen as waves on the continued curve, which had a definite rate of twelve to thirteen per second. The rate of discharge from the spinal motor centres is about eight to ten per second.[1] What was really wanted was a knowledge of the rate of nerve impulses passing along the pyramidal tracts. This might be ascertained by the use of Lippmann's electrometer and observing the variations of the electric potential. This was a point for future investigation. It has been proved experimentally that the only seats of motor nerve discharge in monkeys and dogs were the cortical and bulbo-spinal. Attention must next be turned to rodents, and in these animals, with but very imperfectly evolved nervous systems, the representation of movements in the cortex of the brain appeared to be of a very imperfect kind. In rodents the most careful work had been done by Franck and Pitres. They could not obtain the sequence of tonic-clonic from exciting the cortex of the brain of rabbits and guinea-pigs. Mr. Horsley had confirmed their observations; the spasm resulting from electrical excitation was sometimes tonic and sometimes clonic—i.e., of a mixed type. But the subject requires further investigation. The differences between these lower and the other higher mammalia might be explained as the result of imperfect evolution of centres, and, above all, imperfect differentiation between the cortical and bulbo-spinal systems. The problem was as follows: Given a convulsion in the rabbit or guinea-pig composed of tonic and clonic spasms, what is the locality of the motor disturbance?

Nothnagel's experiments were made by—1. Injections of chromic acid into the substance of the brain. These were so inexact as to need no further discussion. 2. Puncture with a needle. Punctures were made—(*a*) about the posterior end of the only sulcus that exists in the hemisphere of the rabbit; (*b*) about the bulb, in a region between the acoustic nucleus on the outside, the eminentia teres on the inside, and the calamus behind. In most cases the needle was driven through the floor of the ventricle nearly to the bone. Mr. Horsley showed that both of these punctures necessarily damaged the motor tracts going from the cortex down to the cord. When the puncture was made in the hemisphere, there was opisthotonos, contraction of pupil, tonic spasm alternating with violent clonic spasm, and ending in tetanus; the jaw and face showed tonic spasm. When the puncture was made through the floor of the fourth ventricle, the face and jaw

[1] THE LANCET, vol. i. 1886, p. 359.

were not affected, and the pupil was dilated, but the other phenomena remained the same. After the convulsions had been induced by this puncture it was found that the attacks recurred spontaneously. Now, in these experiments a lesion of the motor tracts was produced, and there was no definite series of muscular movements. The work of Kussmaul and Tenner, of Brown-Séquard, of Prevost of Geneva, Landois, Hermann, and Escher, constituted a series of experimental production of convulsions by vascular disturbance. Kussmaul and Tenner caused anæmia of the brain by ligature of both arteries going to the brain or by bleeding. The series of phenomena they observed were given in detail, and it was noted that considerable confusion existed as to the sequence and combination of tonic and clonic spasm. By compressing the aorta of rabbits, as had been done by Brown-Séquard and Prevost, muscular twitching and clonic spasms in the legs were evoked. These could not be explained as the result of anæmia of the legs, for ligature of the arteries going to them caused no such clonic movements. There was no doubt that they were due to anæmia of the lower end of the spinal cord, which received its chief blood-supply from the abdominal aorta by branches through the intervertebral foramina.

The next series of observations were those in which the convulsions were elicited by reflex irritation. Brown-Séquard had two methods of doing this—(1) hemisection of the cord, and especially of the posterior columns; (2) production of injury to the sciatic nerve. Westphal rendered guinea-pigs "epileptic" also by percussion of the frontal region, which doubtless caused minute hæmorrhages in the fourth ventricle as the effect of a kind of *contrecoup*. It was important to know, as Mr. Horsley had definitely determined, that there was no need in Brown-Séquard's methods that the wounds should suppurate, or even inflame much; even if primary union were obtained by antiseptic methods, the nervous effects followed equally well. In this so-called "epilepsy" of guinea-pigs it was most important to observe that the convulsive movements did not commence immediately after the operation. In France there was an "incubation period" of two weeks; in England and the United States a longer period of six weeks. Was it too much to suppose that there were racial differences even in animals, bearing in mind the greater frequency of hystero-epilepsy with the French? A fully developed fit was not the first thing to be observed; there was always a gradual development. The fits were evoked by touching the epileptogenous zone, which in the guinea-pig was on the same side of the head as the hemisection of the cord, or injury to the sciatic nerve. At first nothing more than a slight tonic spasm, causing the head to deviate to the same side as the lesion, would be observed. Later a complete fit would occur, and the phenomena were, in order, (1) slight period of latency after stroking the region of the angle of the jaw and behind the ear; (2) lateral tonic spasm as above, followed by complete pleurosthotonos, and spreading movements of the toes from tonic spasm in the limbs; (3) loss of consciousness, as inferred by the insensitivity of the conjunctiva, and the animal's falling over on its back. (4) then rapid clonic spasm of the whole four limbs, with genuine opisthotonos and opening of the mouth, so that the head and trunk was in a tonic and the belly and limbs in a clonic state. There seemed to be little doubt that the induced epilepsy was a pure neurosis. The incubation period and the slow development of the disease were very important features. The matter was still under investigation. Mr. Horsley considered that there was nothing in the results of the experimental researches that necessitated the hypothesis of a special coördinating convulsive centre. Coördination was effected by the functional and structural union of all bulbo-spinal centres. The so-called respiratory centres, probably brought into play the lower centres, innervating the respiratory muscles. In Landois', Hermann's, and Escher's experiments of ligaturing the veins returning blood from the head, the venous stagnation and plethora thus produced were followed by coma and convulsions; the fact was interesting, but too much stress could not be laid on it as proving any theory, vaso-motor or other, of epilepsy.

LECTURE V.

This lecture was occupied with the discussion of the convulsions evoked by discharge from the motor part of the cortex cerebri. It was possible that the part of the cortex producing the convulsion might be sensory (Ferrier) as well as motor. Ferrier had evoked convulsions by stimulating the temporo-sphenoidal lobe. The convulsion in which tonic spasm followed by clonic spasm was the essential feature was clearly shown by experiment to be dependent on the cortex cerebri. Stimulation of the fibres of the corona radiata, after cutting away the cortex, did not produce the typical series of events—tonic, clonic. Mr. Horsley had observed that there was a great difference between different monkeys and different parts of the motor cortex in respect of the facility with which convulsions could be evoked. The conditions of the cerebrum under which epileptogenous states are excitable were very numerous. Individual peculiarity was an important factor; so also were age, illness, and drugs, like absinthe and alcohol. If a monkey were lowered in health as the result of diarrhœa, a convulsion was more easily elicited than in the same animal when well. Old people and animals were less liable to cortical epilepsy, and, generally, very young animals also. Absinthe and alcohol injected into the venous circulation might spontaneously originate convulsions of cortical type. Coarse disease, such as septic meningitis, traumatisms, and new growths, could also excite true cortical convulsions, and of course electricity, employed experimentally. The general characteristics of the convulsion were the presence of a period of latency, then tonic spasm, then clonic spasm, arrest of respiration, with cyanosis and salivation, though the precise relationship of these phenomena to one another could not be proved as yet. There was also an effect on the heart. Paralysis and mania followed not only in man but in the lower animals.

Dr. Hughlings Jackson's views of the representation of movements in the hemispheres were sketched, and the chief point in them, so far as the present subject went, was that each hemisphere represented both sides of the body. The representation of the opposite side was most marked, but still there was a degree of representation of the same side of the body in the same cerebral hemisphere. According to these theoretical views of Dr. Hughlings Jackson, it would be possible to evoke convulsions of the whole of the body by stimulating one motor centre. The upper arm centre, for example, if stimulated, would produce movements in the opposite shoulder, but theoretically it could cause spasm down the opposite arm, down the opposite leg, the trunk, head, neck, and face, and then invade the muscles of the same side of the body as the stimulated centre, and in the same order above mentioned. In such a fashion is this representation imagined that the left lower part of the face would be represented, but the least so in the left upper arm centre. However probable these views might be theoretically, Mr. Horsley said that they obtained no proof, either clinically or experimentally. Clinical and experimental evidence simply showed that one half of the body was represented in the opposite hemisphere, with but few exceptions. Experiments, moreover, did not support Broadbent's hypothesis.[2] It was important to determine whether a passage of nervous energy or discharge could take place across from one hemisphere to another by way of the corpus callosum. Mr. Horsley quoted an observation made on a boy who was the victim of tubercular meningitis. The right arm was paralysed and rigid; on flexing it forcibly, it was found that the left arm became adducted. There was no doubt of the causal relationship between the two phenomena. The interval that elapsed between the cause in the right arm and the contraction in the left was always a second, and sometimes longer. This time was far longer than would be necessary for the passage of energy from one anterior spinal horn to the other. Mr. Horsley suggested that the nerve impulse from forcible flexion of the rigid arm passed upwards to the left hemisphere, and then discharged the energy in the right hemisphere by way of the corpus callosum. At the necropsy a conglomeration of tubercles was found in the left motor cortex, which explained the palsy and rigidity. The diagnosis of the lesion was made during life. Tracings of the convulsions in cortical epilepsy proved also that there must be a passage of nervous energy though the corpus callosum. It has been shown that the sequence[2] tonic-clonic spasm can only occur when the cortex is discharging. If the convulsion be bilateral when the cause is unilateral, and if the bilateral convulsion have the cortical character, it is clear in the light of experimental evidence

[2] See article on Substitutions in THE LANCET, vol. ii. 1884, p. 7.

that the two hemispheres must have been discharging. The march of the spasm in cortical epilepsy is explained on the facts of experimentation as discovered by Ferrier, Schäfer, and Horsley. If the spasm begins in the right face, it passes to the arm, then to the leg, and then to the trunk of the same side; the convulsions, as a rule, begin later in the left limbs. The experimental evidence on this matter was detailed. Albertoni operated on dogs and ablated one motor area, and some days later exposed the opposite hemisphere, and on excitation he obtained generalised bilateral fits. This would seem to be contrary to the above views, but Mr. Horsley said that it was doubtful whether all the motor areas on one side had been removed. Franck and Pitres had operated on one cat by dividing the corpus callosum, and found that a cortical convulsion (i. e., tonic followed by clonic) could be obtained in all four limbs. It may be that these adverse facts can be explained on the knowledge that in the carnivora and some human beings the course taken by the fibres of the pyramidal tracts would seem to be bilateral in the cord for each hemisphere. So that anatomically there is some ground for expecting some bilateral effect when one hemisphere discharged. What, however, is the clinical and experimental fact? Mr. Horsley next gave in detail certain experimental and clinical evidence which seemed to show conclusively that, as a rule, each hemisphere convulsed its own (the opposite) side of the body. In hemiplegia, if the motor cortex was completely cut off the limbs remained permanently paralysed. Then, again, in unilateral fits there was no necessary spread to the opposite side of the body. In one monkey with unilateral cortical fits induced by electricity the muscles of the back and belly were convulsed only on the one side, showing that even such muscles as are supposed to act bilaterally and to be closely united spinally, did not do so in cortical fits—a strong argument against Broadbent's explanation of the escape of certain groups of muscles in ordinary hemiplegia. A case of Obeke's was also narrated as bearing on the point.[3] It was a case of congenital epilepsy and mental enfeeblement; the epilepsy was bilateral. Late in life a hæmorrhage occurred into the right internal capsule, destroying it and producing complete left hemiplegia and hemianæsthesia. After this attack, whenever the epilepsy appeared, it did not affect the left side of the body. The conclusion to be arrived at was that the bilateral representation, if it exists, is very imperfect.

[3] Berlin. Klin. Wochen., 1880, p. 534, No. 37.

Mr. Horsley next gave an account of experiments made by him which seemed to prove the same conclusion. In the first group of experiments the corpus callosum was completely divided. In the first dog the division was found to be complete, and a slight injury had been done to the right internal capsule. Stimulation of either cortex caused tonic spasm only, no "cortical" epilepsy, in the opposite side of the body. In the second dog there was, besides division of the corpus callosum, slight injury to its anterior end; in this case there was epilepsy, but only in the side of the body opposite to the hemisphere stimulated. In the third dog the division of the corpus callosum was perfect, save at the lower border of the rostrum. Stimulation of one cortex produced tonic spasm in the proximal segments of all four limbs, but genuine epilepsy only in the opposite limbs. In a monkey, the corpus callosum, anterior commissure, median commissure, and fornix were all completely divided, with the result that cortical stimulation caused epilepsy only in the opposite limbs. In the second group of experiments the motor centres were excised and the electrical stimulation practised on both hemispheres. In a monkey, the right motor centres were freely excised, with consequent left hemiplegia. Excitation of either hemisphere produced generally epilepsy, provided a very strong current were used. When the right hemisphere was alone stimulated by a moderate current, the convulsions were very marked, but only in the *right* limbs; there were practically no convulsions in the *left* limbs. It should be said that the whole of the right motor region was not entirely removed. When the left hemisphere was stimulated, the convulsions were very well marked in the right limbs, but absent from the left. Munk and Luciani had worked at the same subject. In the third class of experiments means were taken to depress the activity of the cortex of the brain on one side. A monkey was trephined on the right side and the wound allowed to become septic, with consequent meningitis; and at the end of two days the left limbs were found to be paralysed, but not completely. Excitation of the right hemisphere produced generalised epilepsy, but almost absolutely right-sided. In this case the passage of energy through the corpus callosum must have taken place, but the stimulated right cortex was unable to respond in the form of cortical epilepsy of the left limbs owing to its depressed state, it being the seat of septic meningitis with venous stagnation and consequent innutrition. In the fourth class of experiments an artificial tumour was produced in the subcortical region, and therefore damaging the fibres of the corona radiata. An injection was made of thin plaster-of-Paris by means of a syringe plunged through a part of the motor cortex. This was done in a monkey on the left side of the brain. Excitation of this left hemisphere caused no effect on the right limbs of the body, but evoked powerful epilepsy, which affected both eyelids and eyes, but only the left side of the face, trunk, and left limbs. Here it would seem that the artificial tumour in the left corona radiata had cut off the path leading from the left cortex to the right half of the body, but had not destroyed the fibres that passed from the left to the right motor cortex. The mere presence of the tumour did not appear to excite any epileptic effect. It would appear, therefore, that something other than mechanical pressure is necessary to put the nerve cells in that condition in which they discharge energy convulsively. The conclusions all round, therefore, were very emphatic, to the effect that convulsions due to cortical discharge are evoked in various groups of muscles by nerve energy proceeding from that centre in each hemisphere which is in relation to each group of muscles, and that in generalised epileptic convulsions both cerebral hemispheres are involved.

LITHOLAPAXY IN MALE CHILDREN AND MALE ADULTS.

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(*Concluded from page 1170.*)

AT the close of the year 1883 a young man, aged twenty, was admitted into the Indore Hospital with stone in the bladder. The stone, which consisted of uric acid and weighed 1140 grains, was disposed of by litholapaxy, and he left the hospital perfectly well twenty days after the operation. Indeed, he might have returned to his home very much sooner, but it was considered wise to keep him for some days under observation in hospital. The notes of this case I have left behind me in India, and am not in a position at present to state how long the operation lasted, or the size of the lithotrite or evacuating catheters employed.

S. M——, aged sixty-seven, an inhabitant of Indore, was admitted into hospital on May 18th, 1884, suffering from symptoms of stone, which had existed for fifteen years. His face bore the traces of great suffering. The pain on passing urine was so great that sometimes he used to strike his forehead against the ground or against the wall of his room in paroxysms of despair. The urine was alkaline in reaction, and its specific gravity 1015. The same day I passed a No. 15 fenestrated lithotrite into the bladder and readily seized a very large stone. The bladder was healthy and roomy, and the urethra very capacious. The stone, however, I found too large to permit of its being cracked across with the lithotrite, and I had not a larger one in my possession. To have cut an old man with a large stone would almost certainly have killed him, and I therefore determined to chip away at the stone until I could so reduce it as to get the lithotrite to lock on it. I was obliged to spend a very long time in chipping away at the outer shell of the stone, and when nearly half an hour had elapsed I had the satisfaction of finding that I was able to lock the lithotrite. Once the stone was cracked across, the operation presented no remarkable features except its great tediousness. At the end of two hours I had only extracted half the stone, and I almost began to despair of success. But my old patient's pulse improved, his breathing was perfectly regular, and he required but little chloroform to keep him in a condition of perfect anæsthesia, and so I was determined to extract the entire stone at one sitting if possible. I was obliged to introduce the lithotrite fourteen different times, and applied the aspirator an equal number

TIGHTLY BOUND

of times. The evacuating catheter which I employed was a No. 29 (French scale). At the end of the fourth hour I had nearly extracted the entire stone, and the last quarter of an hour of the operation was spent in sounding and in disposing of the last few fragments. The stone consisted of urate of lime, and when damp weighed 1600 grs. I have weighed it recently, and after two hot weathers in India its weight is 1470 grs.—May 18th: Evening temperature 102·4°; pulse 96.—19th: Feels slight pain over bladder region: urine somewhat red; not much pain in micturition; has almost recovered from the effects of chloroform.—21st: Patient feels quite well; walks about his room; is anxious to go home.—23rd: A small lithotrite having been introduced into the bladder, a small fragment of stone was detected lying close to its neck, and was removed between the blades of the lithotrite.—24th: Urine perfectly clear: no pain in micturition. Allowed to return home.

The above case is a good example of the results which can be achieved by Bigelow's operation. Compare the history of this case after the operation of litholapaxy with what it would have been had I extracted the stone by supra-pubic cystotomy, and the superiority of Bigelow's method over other systems of treatment becomes very striking. This man was in the enjoyment of excellent health when I left India in March last, and was perfectly free from all bladder trouble. I may here mention that his testicles have never descended into the scrotum, or even into the inguinal canal. He affirms that he has had two children, and suffered once from syphilis and once from gonorrhœa, proving that a man may be the subject of retained abdominal testicles and still possess undiminished virile power.

M. S——, aged thirty years, admitted into the Indore Hospital on Feb. 1st, 1885, with symptoms of stone in the bladder. A No. 15 fenestrated lithotrite having been passed into the bladder, a large stone was easily seized and crushed. The lithotrite was introduced into the bladder eight times, and the débris evacuated through a No. 29 catheter (French scale). The operation lasted one hour and thirty-seven minutes, and the débris of the stone, which consisted of mixed uric acid and urate of ammonia, weighed 770 grs. The patient left the hospital quite well on the twelfth day succeeding the operation.

L——, aged thirty years, admitted into the Indore Hospital on May 20th, 1885, with stone symptoms, which had existed for twelve or fifteen years. A No. 15 fenestrated lithotrite being passed into the bladder, a stone was readily seized. The stone I found was a very hard one, and tested the strength of the lithotrite employed, one of Weiss and Son's make. The male blade seemed to me to sink into the stone. The lithotrite was introduced eleven different times, and the evacuating catheters employed were No. 16 English and No. 25 French scale. The operation lasted two hours and four minutes, and the stone extracted weighed 550 grains. It consisted of oxalate of lime, was quite black in colour, and was the hardest stone I have yet crushed. The man made an excellent recovery, and left the hospital quite well ten days after the operation. The lithotrite on this occasion did its work splendidly. The amount of pressure I was obliged to exert in screwing up the lithotrite was represented by the whole strength of my wrist and forearm. In attacking stones of this description, I screw up the lithotrite as tightly as I think I can do with safety, and then wait for some seconds before endeavouring to give the handle of the screw an extra half turn, and I generally find that in the interim the stone gives way with a snap under the continuous pressure exerted by the blades of the lithotrite. The screw power of the lithotrite should be worked judiciously and carefully when one meets with very hard stones. The inexperienced litholapaxist who, so to speak, "rushes" a hard mulberry calculus is not acting fairly either towards his patient or the surgical instrument maker. The blades of the best made lithotrite are liable to break if the whole power of the screw is rapidly brought into play against a very hard and tough stone.

M——, a man aged forty, was admitted into the Indore Hospital on July 3rd, 1885, suffering from stone symptoms, which had existed for some years. On introducing a No. 15 fenestrated lithotrite into the bladder, a large stone was readily seized and crushed. The stone was a very hard one. The lithotrite was introduced on six different occasions, and the débris extracted by a No. 16 evacuating catheter. The operation lasted eighty-eight minutes, and the stone, which consisted principally of oxalate of lime with some mixture of lithic acid, weighed 1100 grs.—July 4th: Urine clear; has some pain in passing urine.—5th: Pain much less; feels quite well. Sir Henry Thompson's sound being passed into the bladder, no particle of stone could be detected.—6th: Went home quite well.

M. S——, aged twenty-five years, admitted into the Indore Hospital on July 11th, 1885, with symptoms of stone, which had existed for some years. Next day, being placed under chloroform, a stone, consisting of lithic acid and oxalate of lime and weighing 787 grs., was evacuated from the bladder in seventy-five minutes. The lithotrites employed were Nos. 11 and 15, and the evacuating catheter used was a No. 16 (English scale). The patient made an excellent recovery, and left the hospital quite well on the seventh day succeeding the operation.

S. B——, aged thirty years, was admitted into the Indore Hospital on March 12th, 1886, suffering from stone in the bladder. This man's stone had been diagnosed by a native practitioner in the city of Iaora, who sent him to me for treatment. He had suffered for seven years from stone symptoms, and several hakims had treated him for gonorrhœa. He was most anxious to be relieved from his sufferings as speedily as possible, and next day, being placed under chloroform, I passed into his bladder a No. 15 fenestrated lithotrite, and at once seized a very large stone. I at once perceived that the stone was far too large for such a lithotrite. I then introduced with great facility a No. 32 fenestrated lithotrite (French scale), which Messrs. Weiss and Son had sent me out in September, 1885. My patient had a wonderfully capacious urethra, for it was not found necessary to slit up the meatus before introducing this powerful lithotrite. The bladder I found also very roomy, and not disposed to spasmodic contraction. I seized the stone, but could not lock the lithotrite. I therefore began to chip away at the stone, and gradually wore away some of its shell. After working in this fashion for about five minutes, I withdrew the lithotrite from the bladder, introduced a No. 31 evacuating catheter (French scale), and then applied the aspirator. I then brought away a quantity of white fine débris, proving at any rate that the covering of the stone was phosphatic. I therefore made up my mind to crush the stone at one sitting if possible, for I had many of the conditions necessary to success on my side. I had a powerful and trusty lithotrite and a large evacuating catheter to hand; a very capacious urethra and a roomy bladder to work in; my patient was young; the stone to be attacked was not, I believed, abnormally hard; and last, though not least, I had gained a considerable experience in performing litholapaxy. I therefore reintroduced the large lithotrite, and started afresh. After further chipping away at the stone I eventually wore it down, and soon I was able to lock the lithorite on it, and crushed it at the rim. Once having crushed it, I felt confident of ultimate success, and not to enter into weary details, I may at once state that after three hours and a half of hard work I had extracted a stone, principally phosphatic, weighing over six ounces avoirdupois. The last half hour of the operation was passed in disposing of the nucleus, which I found composed of oxalate of lime, and in searching for pieces of débris lying in the trigone of the bladder. My patient took the chloroform well, and I had no anxiety on this score during the operation. Next day, I found the stone, when dried, to weigh exactly 2804 grs. The nucleus, which I easily picked out from the mass of débris, weighed 100 grs. During the operation I introduced the lithotrite thirteen different times into the bladder, and the evacuating catheter an equal number of times. I exhibited the débris of this stone at the meeting of the British Medical Association held at Brighton in August last. It is, as far as I know, the largest stone which has ever been removed from the bladder by Bigelow's method. To perform an operation of this kind with success is a great strain on the resources of the surgeon who attempts it. He must be ever gentle in his movements, and at the same time persevering and courageous in attack. He must have implicit confidence in the lithotrite which he employs, and he must of all things be patient and in no hurry to finish the operation. Portions of this stone I found extremely hard. On one or two occasions I screwed up the lithotrite with almost the whole strength of my wrist and kept up the pressure. I patiently awaited the result, and soon I had the satisfaction of hearing the snap of the stone as it gave way under the continued pressure of the blades of the lithotrite. I would not, however, recommend an inexperienced litholapaxist to attack such a stone. Had this stone been composed of hard lithic acid or oxalate

of lime, the correct operation for its removal would, I think, have been supra-pubic cystotomy, but being what it was the course which I pursued was doubtless the correct one. The subsequent history of this case was the following:—March 13th (evening): Had completely recovered from the effects of chloroform at 3.45 P.M. One drop of nitro-glycerine was then given. Passed urine at 4.30 and again at 6.20 P.M.; slight pain over bladder and urethra; feels better than before the operation. Evening temperature 102·6°; pulse 96.—14th: Morning temperature 100·2°; pulse 90; slept well; some pain on pressure over bladder and urethra; pain on micturition less than yesterday; colour of urine brown; large deposit of phosphates in urine on cooling; feels much better. Evening temperature 102·2°.—15th: Morning temperature 99·2°; slept well; feels much better. Evening temperature 99·0°.—16th: Pain over bladder and urethra less; passed some small bits of stone along with the urine during the night; sat out in the verandah of the hospital for about half an hour to-day.—17th: Passed some more small portions of stone. Morning temperature 98·4°; evening temperature 99°.—18th: Passed some very fine phosphatic sand; sits out in the verandah daily.—20th: Patient's general health improving; pain in urethra and over bladder on pressure much less.—21st: Passes urine freely and without much pain; has some slight purulent discharge from urethra; has some pain over descending colon.—22nd: Some pain in the left testicle. Placed under chloroform, and bladder washed out with saturated solution of boracic acid. No particle of stone could be detected by Sir H. Thompson's sound. No click on using aspirator.—23rd: Had four motions during the night; pain in left testicle much less. Morning temperature 98·4°; pulse 96; sits out in verandah.—25th; Has some pain in region of left kidney; morphia injected.—26th: Pain disappeared from region of left kidney; looks quite cheerful; urine still continues to deposit phosphates on cooling.—27th: Slight pain in passing urine; walks about the hospital grounds. Evening temperature 98·4°.—28th: No urinary symptoms of any importance, except very slight pain in passing urine; urine, however, continues to deposit phosphates; general health much improved.

Remarks.—I left Indore on March 28th on furlough. A letter lately received from India tells me that this patient left Indore for his home the day on which I started for Bombay. When I showed the débris of this man's stone at Brighton in August last, I was under the impression that he had remained in hospital until April 3rd.

That litholapaxy is capable of successfully dealing with stones of considerable size occurring in females, the following case will go to prove.

B ——, an old woman aged eighty, was admitted into the Indore Hospital on March 17th, 1886, with stone symptoms which had existed for two years. She had lost control over the bladder for more than one year, and had suffered much from irritability of the same. A stone being found, she was next day placed under chloroform and a uric acid calculus weighing 395 grains removed from the bladder in sixty-seven minutes. The evacuating catheter used was No. 16 (English scale), and the lithotrite employed was No. 14 (English scale). The operation presented no features of difficulty, and the evacuating catheter and lithotrite passed with the greatest ease. When working the aspirator an assistant's finger pressed the meatus of the urethra against the catheter, and thus very little water leaked out between the wall of the urethra and the catheter.—March 19th: Colour of urine pale; it still dribbles away.—20th: Pulse 84; colour of urine brown; no pain over bladder; feels much better.—21st: Has some pain after micturition; passes urine involuntarily only when she moves about in bed; no pain over bladder.—22nd: Is able to retain her urine for two hours at a time; feels very weak.—23rd: Is now able to retain her urine for three hours at a time; she passed some this morning at 6 A.M., at 8 A.M., and again at 11 A.M.—24th: Feels much better; is fast regaining complete power over the bladder.—25th: Allowed to go home to-day, feeling quite well.

Remarks.—Had the stone in this case been twice the weight it proved to be, I do not think there would have been any difficulty in removing it at one sitting.

Were it necessary or profitable to do so, I might relate the history of several more cases wherein I have disposed of stones weighing between 700 and 800 grains by litholapaxy. The cases, however, which I have now recorded, together with many others already reported by Freyer, wherein he has successfully removed very large calculi from the bladder by litholapaxy prove how wide indeed is the legitimate sphere of Bigelow's operation. Sir Henry Thompson is of opinion that a surgeon who is not practically familiar with lithotrity, on meeting with a hard calculus which he cannot readily seize with a lithotrite, will be more likely to achieve a lasting success for his patient by adopting supra-pubic cystotomy in preference to litholapaxy. This may be a wise and sound rule for those who at rare intervals meet with a case of stone, looking at the question from the standpoints of the patient's safety and the surgeon's reputation. But there is another standpoint from which this subject must be viewed, and it is this: Given a patient labouring under the presence of a hard and large stone lying in a healthy and roomy bladder, and an experienced and skilled litholapaxist at hand to treat him, what for the patient is the safest and most satisfactory method of getting rid of such a stone? The record of cases which I have now laid before my readers may supply the answer to this important question. For my part, I think that recourse to Bigelow's operation will best fulfil the requirements of such a patient. Believing, as I do, that litholapaxy is the best method of dealing with the vast majority of stones we meet with in men, women, and children, I must confess that I view with considerable apprehension and misgiving the attempts which are now being made in England by the advocates of supra-pubic cystotomy to apply this revived surgical procedure to the treatment of many cases of stone which would be more appropriately and expeditiously disposed of by Bigelow's operation. And now I leave to the judgment of practical surgeons in Great Britain this record of fifty-eight litholapaxies performed on male children.

St. James's-square.

NOTE ON THE

RELATIVE DIGESTIBILITY OF THE CHIEF ALBUMINOID PROXIMATE PRINCIPLES,

WITH REMARKS ON ITS BEARING ON INVALID DIET.

BY JAMES W. FRASER, M.D., C.M. ED., M.R.C.S.

IN the course of some experiments on peptic and pancreatic digestion, I had to work with small quantities of more or less pure albuminoid proximate principles, digesting them with peptic and pancreatic fluids. In estimating the results of these experiments, I was struck by the varying digestibility of the albuminoids, and thought that an account of the results obtained might be valuable.

The experiments were performed with a peptic fluid, consisting of Benger's liquor pepticus, diluted with a ·1 per cent. hydrochloric acid solution, and a pancreatic fluid consisting of the liquor pancreaticus of Benger. The digestion took place in small dialysers suspended each in a beaker containing ·1 per cent. hydrochloric acid solution for peptic digestion; the beaker, dialyser, and contents were kept at a temperature of 37·7° C. (100° F.), and peptic digestion continued for six hours; the liquids, both inside and out of the dialyser being kept in constant slight motion by suitable apparatus. At the end of peptic digestion, the contents of the dialyser were neutralised, and then made alkaline with carbonate of soda, so as to contain ·1 per cent. by weight of the salt, and liquor pancreaticus was added; the ·1 per cent. hydrochloric acid in the beaker was replaced by ·1 per cent. carbonate of soda solution, and pancreatic digestion was allowed to proceed for six hours at 37·7° C. At the end of this time the carbonate of soda solution was replaced by distilled water, and the beaker and contents heated till the temperature in the dialyser was raised to 80° C., so as to kill the ferment. Dialysis was then allowed to proceed for twenty-four hours. Of course, definite and fixed quantities of digestive fluids and external liquids were employed in all cases, and in most an equal quantity of the proximate principle was used. The level of the liquid in the dialyser and in the beaker was kept the same. The dialysed liquids from these periods of the experiment were preserved unmixed, and the results of each are noted under the heads of "peptic digestion," "pancreatic digestion," and "dialysis" respectively. The dialysed liquids were evaporated to dryness in the presence of a small quan-

tity of purified chloride of sodium to make the residue a more manageable substance, and the amount of peptone dialysed estimated as nitrogen by a modified Nessler process, of which full details may be found in a paper on the Action of Infused Beverages on Peptic Digestion.[1] The results in these tables, unless otherwise stated, are expressed as nitrogen; and the amount of nitrogen passing through the dialysers from self-digestion of the peptic and pancreatic fluids, having been previously ascertained by experiment, has been deducted from these results.

Table I. shows the amount and condition of each albuminoid subjected to experiment, the amount of nitrogen and of dry solid contained, whether ascertained by experiment or calculated from the formulæ of former experimenters. Myosin gave so much trouble in preparation that only a very small quantity was used in the experiment with it in the cooked state, and the cooked myosin was prepared by boiling some of the samples contained much less dry solid than others; this depended partly on their physical condition, whether solution or damp solid. The very small amount of cooked myosin has been explained, and that in the case of alkali-albumen depended on the fact that the alkali-albumen had to be in acid solution for peptic digestion, and that this solution had to be rapidly prepared at the last moment to prevent the alkali-albumen changing into syntonin. Cooked serum-albumen was prepared from a solution of purified albumen concentrated at 37·7° C. till it was sufficiently strong to solidify on boiling. It was then heated to boiling in a water-bath and formed a pultaceous mass of granules of coagulated albumen held together by a more liquid substance. It was, therefore, more easily acted on by the digestive fluids than hard-boiled white of egg, as the latter forms a fairly homogeneous substance. No experiment was performed with fibrin, as this forms but a small element

TABLE I.—*Amount and Condition of the Proximate Principles used in each Experiment, the Amount of Dry Solid each represents, the Amount of Nitrogen in each, and its Percentage.*

	Condition and amount used.	Dry solid.	Nitrogen in grammes.	Nitrogen per cent.
Albumens:				
Serum	Solution, 10 ccs.	·288 grm.	·044 grm.†	15·5 per cent.†
Egg	Solution, 10 ccs.	·169 ,,	·026 ,, †	15·5 ,, †
Albumens, cooked:				
Serum	Damp solid, 2 grms.	·224 ,,	·035 ,, †	15·5 ,, †
Egg	Damp solid, 2 grms.	·408 ,, *	·063 ,, †	15·5 ,, †
Globulins:				
Myosin, raw	Solution, 10 ccs.	·137 ,,	·027 ,,	19·7 ,,
Myosin, cooked	Damp solid, ·35 grm.	·034 ,,	·0067 ,,	19·7 ,,
Derived albumens:				
Syntonin	Solution, 10 ccs.	·253 ,,	·039 ,,	15·5 ,,
Alkali-albumen	Solution, 10 ccs.	·095 ,,	·014 ,,	14·3 ,,
Casein	Damp solid, 2 grms.	·541 ,,	·080 ,,	14·9 ,,
Vegetable albumen:				
Gluten, impure	Damp solid, 2 grms.	·728 ,,	·087 ,,	11·98 ,,

* Calculated from composition of white of egg.

† Calculated from Mulder's analysis of albumen.

TABLE II.—*Nutritive Values of Albuminoid Proximate Principles.*

	A. Peptic digestion.	B. Pancreatic digestion.	C. Dialysis.	D. Total of A, B, and C.	E. Nitrogen value of amount of principle used in the experiment.
Albumens:	Grammes.	Grammes.	Grammes.	Grammes.	Grammes.
Serum (Experiment 1)	·00087	·00342	·01122	·01551	·044
Serum (Experiment 2)	·00073	·00299	·00858	·01230	·044*
Egg	·00051	·00178	·00315	·00544	·026
Albumens, cooked:					
Serum	·00020	·00139	·00438	·00597	·035
Egg (Experiment 1)	·00043	·00053	·01029	·01125	·063
Egg (Experiment 2)	·00030	·00052	·00499	·00581	·063
Globulins:					
Myosin, raw	·00028	·00089	·00259	·00376	·027
Myosin, cooked	·00007	·00106	·00203	·00316	·0067
Derived albumens:					
Syntonin	·00049	·00219	·00765	·01033	·039
Alkali albumen	·00009	·00105	·00208	·00310	·014
Casein	·00053	·00246	·01071	·01370	·080
Vegetable albumens:					
Gluten	·00053	·00134	·00650	·00837	·087

* This result is rather too large, on account of the separation of the fibrinous clot noted in the text.

a solution of the raw substance in salt solution, filtering off the precipitated flakes and using them after pressing between folds of linen. The gluten used was a mere mixture of albuminoids, obtained by washing flour, and was not perfectly free from starch. The uncooked egg-albumen was a filtered solution of white of egg, and therefore contained the salts; and the cooked egg-albumen was hard-boiled white of egg. The raw serum-albumen experiments were performed with measured quantities of ascitic fluid rich in albumen, but containing salts, and in the first experiment a little fibrin. This latter had clotted out in the second experiment, and therefore the figures in Table I. are rather too large for the second case. The other proximate principles used were fairly pure samples. As will be seen from the table, of diet, and alkali-albumen was only introduced on account of its close resemblance to casein.

Table II. shows the amount of the proximate principle (expressed as nitrogen) peptonised and dialysed in each of the three periods of the experiment, and the total of the three. Table III. shows the percentage relation between the amounts dialysed and the amount of albuminoid actually used. In no case did 50 per cent. of the dry solids pass through the dialyser; this depending rather, it is to be believed, on the short period of dialysis than on imperfect peptonisation, for when solids were used in the experiment, in almost every case they were entirely dissolved, and no precipitate was caused by the heating to 80° C. at the commencement of dialysis. The nearest case to 50 per cent. passing through the dialysers is that of cooked myosin (47·15 per cent.), but this seems rather to depend on the

[1] Journal of Anatomy and Physiology, vol. xx., p. 361.

small amount used than on the special digestibility of the substance, for it is to be noticed that during peptic digestion only one quarter as much passed through the dialysers, as in the case of raw myosin, and that it is in the stage of dialysis that the amount is made up[2]. After this the most digestible albuminoid is raw serum-albumen, which in two experiments gave to dialysis 35·24 per cent. and 27·95 per cent. respectively, and the others follow in order: syntonin, 26·47 per cent.; alkali-albumen, 22·14 per cent.; raw egg-albumen, 20·91 per cent.; casein, 17·11 per cent.; cooked egg-albumen (first experiment), 17·9 per cent.; cooked serum-albumen, 17·05 per cent.; raw myosin, 13·91 per cent.; gluten, 9·61 per cent.; and cooked egg-albumen (second experiment), 9·21 per cent. It might have been expected that syntonin, whose digestion is already half done, would head the list, but this is not the case though only raw serum-albumen is fairly ahead of it.

in one case slightly the highest; then follows syntonin—a result which, here especially, might be expected to head the list, and whose secondary position has no apparent reason. The others in order are cooked myosin, raw myosin, cooked egg-albumen (first experiment), casein, gluten, cooked serum-albumen, cooked egg-albumen (second experiment), and alkali-albumen. Therefore the raw albumens appear most susceptible of peptic digestion, and syntonin next.

Turning next to tryptic digestion, cooked myosin heads the list; but the same reasons for regarding the total result of this experiment as doubtful apply to the partial result. Of the more certain experiments, the first, raw serum-albumen, is the highest, with 7·77 per cent.; next comes alkali-albumen, with 7·50 per cent.; followed in order by raw egg-albumen, raw serum-albumen (second experiment), syntonin, cooked serum-albumen, raw myosin, casein, gluten, and the two cooked egg-albumens, these last two not getting

TABLE III.—*Percentage of Albuminoid Proximate Principles Digested and Dialysed in each Stage of the Experiments.*

	A. Peptic digestion.	B. Pancreatic digestion.	C. Dialysis.	D. Total of A, B, and C.
Albumens:				
Serum (Experiment 1)	1·97 per cent.	7·77 per cent.	25·50 per cent.	35·24 per cent.
Serum (Experiment 2)*	1·86 ,,	6·79 ,,	19·50 ,,	27·95 ,,
Egg	1·96 ,,	6·84 ,,	12·11 ,,	20·91 ,,
Albumens, cooked:				
Serum	0·57 ,,	3·97 ,,	12·51 ,,	17·05 ,,
Egg (Experiment 1)	0·68 ,,	0·84 ,,	16·30 ,,	17·92 ,,
Egg (Experiment 2)	0·47 ,,	0·82 ,,	7·92 ,,	9·21 ,,
Globulins:				
Myosin, raw	1·03 ,,	3·29 ,,	9·59 ,,	13·91 ,,
Myosin, cooked	1·04 ,,	15·82 ,,	30·29 ,,	47·15 ,,
Derived albumens:				
Syntonin	1·25 ,,	5·61 ,,	19·61 ,,	26·47 ,,
Alkali albumen	0·14 ,,	7·80 ,,	14·50 ,,	22·14 ,,
Casein	0·66 ,,	3·07 ,,	13·38 ,,	17·11 ,,
Vegetable albumens:				
Gluten	0·69 ,,	1·54 ,,	7·47 ,,	9·61 ,,

* All the results of this experiment are probably rather too small, for the reason noted in Table II.

TABLE IV.—*Beef-tea Experiments.*

	A. Peptic digestion.	B. Pancreatic digestion.	C. Dialysis.	D. Total of A, B, and C.	E. Albuminoid nitrogen (obtained by deducting the nitrogen dialysable without digestion, from D).
	Grammes.	Grammes.	Grammes.	Grammes.	Grammes.
Beef-tea	·00409	·00425	·00802	·01636	·00918
Ditto with white of egg	·00357	·00402	·01156	·01915	·01197
Ditto with serum-albumen	·00335	·00381	·01112	·01828	·01110
Hydrochloric acid beef-tea	·00195	·00187	·00504	·00886	—

TABLE V.—*Nitrogen contained in Dialysable Matters in Undigested Beef-tea.*

A. Dialysed in first 6 hours.	B. Dialysed in second 6 hours.	C. Dialysed from 12th to 36th hour.	D. Total of A, B, and C.
·00130 grm.	·00132 grm.	·00456 grm.	·00718 grm.

Examining next the amounts of nitrogen dialysed in each stage of the experiment, it is seen that in the peptic digestion stage in no case did 2 per cent. pass through, a small result, amply accounted for by the short period of dialysis (six hours), and by the fact that the dialysable matters had to start from zero and be formed until a sufficient pressure, so to speak, to cause dialysis was obtained. The highest peptic results are with the uncooked albumens, serum being up to 1 per cent. Here the substances most easily soluble in an alkaline menstruum have naturally an advantage in digestion, which accounts for the high positions of the raw albumens, of the alkali-albumen, and of syntonin.

During these two stages peptones had been forming more rapidly than they could pass away through the parchment paper, and had accumulated in the dialysers; and hence, when, the ferment having been killed by heating to 80° C., dialysis was continued for twenty-four hours, a larger proportion of crystalloid matter passed through than in the former stages. These peptones are both of peptic and tryptic formation, as is also the case with those under the head of pancreatic digestion. The largest proportionate result is here again found in the doubtful case of cooked myosin, but it is not very far ahead of raw serum-albumen (first experiment), with 25·50 per cent.; and this is followed by

[2] The relative digestibility of raw and cooked meat cannot be considered settled. E. Jessen (Zeitschrift fur Biologie, 1883) states that 25 grms. of cooked beef left a residue of 17 grms. to 18 grms. after twenty-four hours' artificial peptic digestion, while 25 grms. of raw beef only left 5·5 grms. Lehman (Physiological Chemistry, vol. iii., p. 318) distinctly states that raw meat is more difficult to digest than cooked. The digestibility of meat no doubt depends on other effects of cooking, softening gelatinous elements, &c., but the experiment above, though doubtful, points to the greater digestibility of cooked myosin as having a bearing on the matter.

syntonin, the second raw serum-albumen experiment, cooked egg-albumen (first experiment), alkali-albumen, casein, cooked serum-albumen, raw egg-albumen, raw myosin, cooked egg-albumen (second experiment), and gluten. All these substances, therefore, have valuable dietetic qualities—as was known in many of the cases, indeed, ages before the substances themselves had been distinguished; but their susceptibility to the various digestive fluids varies. Several of them are not ordinarily used as foods at all, as, for example, serum-albumen, raw myosin, syntonin, or alkali-albumen. But among these are the most digestible of the albuminoids, and though they may not be required in every-day diet in that of invalids, some of them would be invaluable.

A formula has been in use for preparing a meat-tea, in which by macerating raw meat with water containing a few drops of hydrochloric acid and some salt a solution containing myosin and syntonin was prepared, but, as it cannot be heated for fear of precipitating the myosin, it forms an unpleasant blood-red liquid, with the taste and odour of raw flesh, and therefore has not become a very popular article of invalid diet. With this exception, and that of foods more or less entirely peptonised, the more soluble albuminoids have been little used for dietetic purposes. Beef-tea, as ordinarily prepared, contains principally extractive matters, and owes the greater part of its nutritive qualities to the deposit of finely divided coagulated albumen and of small portions of muscular fibre which it contains. Now it would be a matter of no very great difficulty to make it almost as nutritious as an equal bulk of solid meat by the addition of roughly prepared albuminoid principles. The white of egg might be added to beef-tea warmed not above the coagulating point of egg-albumen (160° F.)—say not scalding hot. This, indeed, is frequently done, and greatly adds to the value of the beef-tea. But egg-albumen is not the most easily digested of these principles. Dried blood-serum is a commercial article, being easily obtained at the price of about 3s. a pound. The preparation of serum-albumen from this mixed substance is easy enough, but it is not to be bought, though possibly if there were a demand the supply would be forthcoming. But the crude article, though only partially soluble, will add greatly to the amount of albumen contained in beef-tea, if macerated in it at a moderate warmth and the undissolved part strained off. Paraglobulin will also be dissolved from the dried serum, if the beef-tea is made fairly salt. The taste of the tea is hardly altered by the serum. Again, if minced raw beef be just covered with very weak hydrochloric acid (four drops of acid to a pint of water) and left to macerate for a night, the liquid strained off and squeezed out of the flesh by wringing in a cloth contains so much syntonin as to become nearly solid on neutralising. Such a solution will remain clear after boiling to remove the raw flavour, and may be used either alone or added to beef-tea or beef extract.

For the sake of showing the advantages of such additions to beef-tea, four experiments were performed, rather roughly, but on the same principles as those detailed above, and in them 10 ccs. of ordinary beef-tea (made with a pound of lean beef to a pint of water), 7·5 ccs. of beef-tea, mixed with 2·5 ccs. of white of egg, 10 ccs. of beef-tea, containing the soluble part of 1 grm. of dried serum and 10 ccs. of hydrochloric acid beef-tea, were respectively digested with the same amounts of peptic and pancreatic fluids as in the other experiments. The results are shown in Table IV. The amounts of nitrogen found are larger than in the other experiments, this depending on the diffusible nature of the extractives in beef-tea and their high nitrogenous equivalents. In the peptic and pancreatic stages plain beef-tea heads the list, and this depends on the less quantity of extractives in the cases where albumens were mixed with the tea, but in the dialysis stage very considerably larger quantities of nitrogen passed through in the cases where egg-albumen and serum-albumen had been added—the egg-albumen slightly leading because more albumen was added in this case than could be dissolved from the 1 grm. of dried serum in that of the serum-albumen. Ten ccs. of beef-tea, with the addition of 20 ccs. of distilled water were subjected to dialysis into similar quantities of distilled water for similar periods to those in the digestion experiments, so as to ascertain if possible how much of the dialysed nitrogenous matter of the beef-tea was derived from extractives. The experiment was performed in the cold,[3] and this, and the absence of the acid liquid in the peptic, and of the alkaline in the pancreatic stage, probably combine to make the result smaller than it would have otherwise been. These results are shown in Table V., and what remains after deducting the total in Table V. from the totals of the beef-tea experiments in Table IV. is shown under the heading lettered E as albuminoid nitrogen—i.e., derived from digested albuminoids not extractives. The hydrochloric acid beef-tea follows far behind the ordinary form, though if all its nitrogen is albuminoid, it is probably more nutritious than ordinary beef-tea, though considerably behind that made nutritive by the addition of albumens.

A few practical hints from these experimental results may be worth noting. First, let it be said, that it is assumed that the digestive powers are not in entire abeyance; for such cases the food given by the mouth or by enemata requires to be in a digested form, and there are many forms of peptonised foods in the market, and many peptonising fluids more or less powerful. But in cases where the digestive powers are impaired but not extinguished, where they may be lost in the stomach but retained in the intestine, or, again, where some obstruction to the passage of solid food into the stomach is causing death by starvation the above experiments may give hints for treatment.

Taking the last first, a case of œsophageal stenosis, malignant or otherwise, in which operation is contra-indicated or declined, and the patient, unable to swallow solids, is sinking. Besides the ordinary endeavours at feeding by the mouth with soups, milk, stimulants, &c., and by the bowel with peptonised enemata, we can add greatly to the nutriment taken by the patient, as long as he can swallow fluids, by simply adding white of egg to his beef-tea at a temperature below that of the coagulation of albumen, or by dissolving in it the albumen of dried blood-serum and filtering off the insoluble part. By this latter means it would not be difficult to dissolve as much as 20 per cent. by weight of albumen in the soup, and so make it as nutritious as an equal weight of meat. Again, syntonin might be made and used alone or dissolved in the soup, and has the advantage that it can be heated to boiling and the raw flavour of the uncooked albumens avoided. Then, when the stomach digestion is impaired and our desire is to stimulate a somewhat lazy organ to action, not to humour it in its laziness by giving it predigested food only requiring absorption, in such a case the raw albumens stand pre-eminent as feeding substances, all of them easily acted upon by the stomach, but all requiring full digestion. They may be given in beef-tea or soups, or in coffee or chocolate, or raw eggs may be eaten, when, as Dr. Hodges said in a lecture recently delivered before the Boston Medical Improvement Society, they should be sucked out of the shell or broken into a glass and drunk out of it; not beaten up into a froth, as they usually are, which carries down entangled air into the stomach, causing flatulence and preventing that free mixture of the digestive fluid with the albumen which is so desirable for perfect digestion. But if the stomach be weaker and require some humouring, the syntonin solution will still give it enough work to do to avoid entire inactivity. The beef-tea, in which the albuminoids are recommended to be dissolved, has been shown to have peptogenetic properties, and would therefore stimulate the stomach secretion; and though Sir W. Roberts[4] has shown that it retards artificial digestion, yet he has also shown that this can be avoided by using a little additional acid in digestion or by removing the organic salts of the beef-tea by dialysis, and one or both of these conditions will be fulfilled in stomach digestion.

The experiments with casein and gluten appear to show that there are very few worse foods for a delicate stomach than the usual bread and milk, for, as has been seen, the stomach only dissolves about ·6 per cent. of these principles in the same time that it dissolves nearly 2 per cent. of serum-albumen. And the casein in the experiment was in an easier form for digestion than that in which it is usually presented to the stomach, for as used it was in a fine granular form practically freed from fat with alcohol and ether; while cows' milk in the stomach forms dense solid clots, rendered all the more insoluble by the fat, which forms the greater part of their bulk. True, the bread acts as a diluent to the clots, breaking them up, with passages for the gastric juice; but still it is evident that for digestion by a delicate stomach bread and milk does not form an ideal food. Whey,

[3] The dialysis of crystalloids through animal membranes increases proportionately with the temperature (Loewy, Zeitsch. für Physiolog. Chemie, Band ix., p. 537).

[4] Dietetics and Dyspepsia, pp. 49 and 56.

which contains all the lact-albumen and also a globulin, is a mildly nutritive fluid and easily digested, for the lact-albumen is the same as serum-albumen. When the stomach digestion is paralysed in acute diseases—a state which, as Sir W. Roberts states,[5] may be diagnosed by the inability to take solid food—the pancreas often retains its power of secreting a peptonising fluid, and the stomach becomes a mere conduit to the duodenum. When such a state occurs, it may not be desirable, for other reasons, to get much nitrogenous food assimilated, for as Auerbach[6] has shown, a nitrogenised diet increases the acidity of the body, and might, in such a case, tend to produce an attack of gout, as was mentioned by Dr. Allchin.[7] But in cases where it is desired to feed the patient through the intestine, the substances noted above as soluble in alkaline fluids, and therefore easily acted on by the pancreatic juice—viz., raw albumens, syntonin, or alkali-albumen,—may be used alone or dissolved in some meat tea.

Hull.

TWO RARE CASES OF ACUTE INTUSSUSCEPTION.

BY JOHN THOMAS, M.R.C.S., L.R.C.P. LOND.,
ASSISTANT-SURGEON TO DINORWIC QUARRIES HOSPITAL.

THE following cases I attended whilst assisting Dr. Smith, of Lewisham-road, London.

CASE 1.—On February 11th, 1886, at 11 P.M., I was summoned to see a child described as suffering from "fits from teething." The history given by the mother was briefly as follows: John C——, aged sixteen months, in good health, was suddenly attacked with great pain in the abdomen and diarrhœa on the 7th whilst at dinner. The diarrhœa, heedless of domestic remedies, continued until the 9th, when the little boy was better for some hours, and then relapsed into a worse condition. On the 10th he strained and passed nothing but slime. Towards the evening vomiting set in, and continued all night and next day until seen by me. In the afternoon of the 11th blood poured out from the body, whereupon the mother wrapped up the child from fright. I found the boy looking collapsed; pulse 146, and not compressible; abdomen empty and asymmetrical; a distinct hollowness to the right, and fulness to the left, of the median line. The infantile buttock garment was soddened with much dry and moist blood. A smooth resisting cylindrical tumour was felt beginning abruptly a little above and to the left of the umbilicus, and passing to the left became indistinct; another tumour passed downwards from the splenic region towards the pelvis—in short, corresponding to the anatomical tract of the colon. Per rectum, within easy reach of my finger was a smooth hard tumour unconnected with the walls, and bimanually impulses were conveyed to the iliac abdominal tumour. I reversed the child's position in bed, placing the pelvis high on the pillow, then kneaded the tumour from above downwards for about fifteen minutes, and administered a draught containing two minims of laudanum. I failed to improvise an insufflating apparatus.

On the 12th, at 9 A.M., I arrived with instruments for active interference, but was surprised to find the little one strongly resenting my interest in him. He had just passed a small liquid motion, clayey in colour. The abdomen was symmetrical and slightly tympanitic.

Remarks.—I trust the extreme rarity of natural subsidence of an intussusception of any magnitude is sufficient excuse for a contribution on a subject fairly thrashed out. "I have not found any case recorded in which spontaneous return of a well-recognised intussusception occurred" are the words of Mr. Jonathan Hutchinson,[1] and are fully endorsed by Mr. George Pollock in Holmes' "System of Surgery" (1883). I am not aware of any other recorded case. The hollowness of the right flank, *signe de Dance*, "is of little or no value."[2] In this case it tends to support the view that the first portion of the colon is displaced. The factors which co-operated in bringing about cure are probably the following:—(*a*) prostrate condition of the child; (*b*) impulses given to the intussusceptum in the rectum by the finger simulating more or less the obsolete treatment with bougies; (*c*) descending or downward kneading probably played an important *rôle* in undoing a folded sheath, so that the two outer layers of the intussusception came into a nearly plane contact—clearing the course, so to speak, for the muscular element; (*d*) laudanum; and (*e*) pre-eminently the smooth muscle of the gut acting under favourable circumstances. Had I continued the kneading the intussusception might have been reduced when first seen. *Experientia docet.*

CASE 2.—E. R——, a fine healthy boy, aged five months, was suddenly seized with an unusual fit of crying and vomiting on March 29th, 1886, at 6 A.M.; straining and passing scanty motions tinged with blood soon followed. Castor oil was given by the mouth and rectum, and the child's abdomen became swollen from the onset of the symptoms. The preceding is the mother's story.

When seen on March 31st, I found the child's abdomen greatly swollen and tympanitic, globular in form, and the greatest measurement was around the pit of the stomach. The child cried and strained violently and simultaneously; in the intermission he was quite calm and did not object to any manipulation. Per rectum, I indistinctly felt something. The anus was dilated with two teaspoon blades, and when the child strained a darkly congested body like the os uteri (this is not a new simile, but a good one) appeared, and quickly retreated when straining ceased. Temperature 99°; pulse 140, fairly full. With a six-ounce injection bottle which was at hand I cautiously injected lukewarm water, some of which returned. I filled the bottle a second time, and when half emptied under moderate pressure a rumbling noise was heard in the abdomen. No water returned, and half a teaspoonful of brandy was given to the child. I felt hopeful, but far from confident, there being no straining and the infant taking the breast without vomiting. In an hour and a half death supervened, sixty-six hours from the onset of the attack.

Necropsy.—Enormously distended coils of intestine protruded as soon as the abdominal cavity was opened; the adjacent surfaces of the coils were adherent through small greyish patches of lymph. In the pelvis was about half a tumblerful of water. It was most difficult to reach the intussusception, and manipulation of it was almost impossible without first letting the gas out of the intestine. There was a descending meso-colon. There were no adhesions in the intussusception, which extended from the spleen to the first portion of the rectum. The sheath was considerably folded, especially near the neck of the intussusception; it (the sheath) was thickened in the part most distant from, and thinned in the part next to, the meso-colic attachment; there was a rent in the thinned portion. The middle layer was three-eighths of an inch thick opposite to its fold, and of the thinness of paper near its fold. The inner layer was deeply congested.

Remarks.—The involution commenced in the ileum and passed through the ileo-cæcal valve; the cæcum and the ascending and the transverse colon then contributed to the growth of the invagination. This form of intussusception is the most rare, and has been termed "the ilaca-ileo-colica" by Leichtenstern.[3] Miss Lane very kindly made for me the appended sketch, which shows well the one-sided apical os and the ileo-cæcal aperture higher up. Post-mortem

[5] Op. cit., p. 68. [6] Arch. f. Path. u. Phrs. Anat., xcviii., 3, p. 512.
[7] THE LANCET, vol. i. 1885, p. 418.
[1] Med. Chir. Trans., vol. lvii., p. 42.
Mr. Treves on Intestinal Obstruction.
[2] Ibid.

examination again taught the advisability of emptying the bowel of its gases as soon as the peritoneal cavity is reached, had laparotomy been performed in such a case. Emptying the bowel with an aspirator, such as Dieulafoy's, would ensure rapid evacuation and bottling up of the obnoxious gases. Traction on the entering layer of the intussusception would not reduce it, but by fixing the entering layer with one hand and unfolding the wrinkles of the sheath with the other, beginning from below and finishing with the wrinkles of the "neck," reduction became possible and easy. Rupture of the gut must have occurred early in the case during one of the peristaltic squalls, and the position of the rent is highly suggestive. The attenuated condition of the sheath in the neighbourhood of the meso-colic attachment—the most fixed part—is hardly due to circular stretching of the walls of the gut, for the intussusceptum is not enough to fill it; it is probably not due to longitudinal stretching, for the folds could have so easily supplied the need. The thickening of the part most distant from the meso-colon, I need hardly remind the reader, is accounted for by œdema and hæmorrhage; but where is the muscle fibre of the thinned portion gone to? In the gravid uterus at term, when it cannot get rid of its contents in due time, it is well known that retraction of the smooth muscle towards the fundus uteri takes place to a dangerous degree, and during one of the uterine contractions "snap" goes a rent in the attenuated part below the "ring of Bandl," unless art or nature brings the case to another issue. Now, if the thinning of the one side of the bowel has contributed to the thickening of the other side, it is a parallel to what obtains in the uterus.

Llanberis, North Wales.

IMPERFORATE ANUS AND RECTUM; RECOVERY.

BY R. HERBERT BARKWELL, M.D.

THE subject of this malformation, an ill-nourished male child, had been born twenty-four hours when, on June 18th, I was called to see it. The case being complicated, instruments had been used at the birth, causing facial paralysis. I was informed that there had been no evacuation from the bowels. I found the anus imperforate, and proceeded to operate in the following manner. The infant being held in the lithotomy position, I dissected along the mesial line, in the natural position of the anus, to the depth of 2½ in.; then with a trocar and cannula I perforated ½ in. further without encountering the bowel. Failing here, I decided to perform colotomy on the following day; in the meantime the perineal incision was washed with a solution of carbolic acid, and dressed with carbolic lint. On June 19th, chloroform having been administered, I made a transverse incision about one finger's breadth above and parallel to the crest of the ilium of the left side, and 2 in. in length. The skin and superficial and muscular tissues were successively divided on a grooved director, and the peritoneum incised to the same extent. The hæmorrhage was copious, and required a sponge soaked in a solution of carbolic to be constantly used, the instruments being also kept wet with it. Recognising the descending colon by its large, dark-greenish, and distended appearance, as compared with the small and light appearance of the smaller intestine, with a polypus forceps I picked and brought it up, outwards and backwards, to the margin of the incision at its posterior part; four curved needles with silver wire fixed the intestine to the abdominal wall; the colon, together with the peritoneum, was sutured at four points to the margin of the wound to prevent it from slipping back and to prevent meconium from escaping into the abdominal cavity. The most projecting part of the colon was now opened; no meconium having escaped, I introduced the broad end of a director and brought away some of a dark-green colour. The abdominal incision being larger than was necessary, I used, to close it up to its margin, three sutures, two anteriorly and one posteriorly. The infant was now given a warm bath, wiped perfectly dry, and placed before the fire, after which it revived considerably from the effect of the chloroform, which had been continued from the commencement to the close of the operation, its movements causing some meconium to escape. The wounded parts were then washed with a 1 in 30 carbolic lotion and dressed with carbolic lint.

During the first few days, the mother's supply of milk being deficient, goat's milk was substituted.—June 20th: Wound looks well; washed and dressed with carbolic lotion and lint; infant vomited at intervals during night, colour greenish yellow; prescribed three grains of nitrate of potash, six grains of bicarbonate of soda, ten minims of tincture of digitalis, six of tincture of belladonna, with one ounce of water, half-teaspoonful doses to be taken every three hours. At 10.30 P.M. the vomiting had ceased, and a little milk given was retained; motion passed of a dark-green colour; re-dressed the wound; no sign of pus.—21st: No motion during night; introduced a grooved director, and, holding the child with left side downwards, a fair quantity came away; commenced taking mother's milk; goes on favourably.—22nd: Meconium continues to discharge freely, but in the evening director again required to render discharge free; vomiting returned.—23rd: Condition the same as on the 22nd.—24th: Two sutures removed; there continues a healthy discharge of fæces each time wound is dressed, which I continue twice a day; margin of wound looks inflamed, due probably to irritation of sutures.—26th: One suture removed; wound improved. At 10.30 P.M. another suture was removed; wound looks well.—27th: Infant improves in every way.—28th: Removed remaining suture; re-dressed wound.—29th: Wound looks well and healthy; no discharge; washed and dressed as usual.—30th: Fæces have become small and solid; wound assuming an elliptical form; perineal wound quite healed.—July 1st: Infant photographed; bowels moved freely.

July 3rd.—Finding the bowels inactive, I prescribed liquor sennæ dulce (two drachms), liquor hydrarg. perchlor. (one drachm), and an ounce of water; one half-teaspoonful p. r. n.—4th: No motion passed; one drachm of castor oil given; not succeeding, I removed the fæces again with director, and ordered one drachm of castor oil at 11 P.M.—5th: No motion; repeated castor oil (one drachm and a half) and liquor sennæ dulce (twenty minims); bowels acted slightly. In the evening repeated castor oil (one drachm).—6th: Milk slightly returns; bowels acting better, but not freely. Gave liquor sennæ dulce again. Has not taken the breast during the day; skin looks drawn; infant peevish and ill.—7th: Infant somewhat better; resumed the breast; still vomiting. The bowels not acting freely, I ordered calomel in one-grain doses to be given night and morning. Wound is now perfectly healed.—8th to 12th: Infant is progressing favourably; calomel, with castor oil, continued at intervals.—12th to 15th: Less aperients required; half-grain doses of calomel to be repeated at night only. From the 15th I commenced giving twenty-minim doses of cod-liver oil, and also continued to have the chest rubbed with it daily. From this date everything has gone on satisfactorily, the infant gaining strength rapidly.

The temperature never exceeded 100° F., and to the end of the convalescence remained nearly normal. The strictest antiseptic precautions were observed throughout the case. I have been somewhat prolix in details of the after-treatment, because I consider that the ultimate success of an operation chiefly depends upon this being carried out. In conclusion, I have to observe my operation is a repetition of Amussat's, slightly modified on the method of Littré—being more adapted to suit the exigency of this case. I wish to acknowledge my indebtedness to Dr. Richardson, who during the operation kindly gave me every assistance.

Lavender-hill, S.W.

HOSPITAL SUNDAY.—The Lord Mayor has received from Sir P. Cunliffe Owen a letter stating that he was requested by the Prince of Wales, Executive President of the Royal Commission for the Colonial and Indian Exhibition, to enclose a cheque for £104 5*s.* 8*d.*, being the amount received from Oct. 8th to Nov. 10th in Dr. James Aveling's "Mechanical Begging Boxes" at the Exhibition for the Hospital Sunday Fund. This makes a total of £404 5*s.* 8*d.* resulting from this ingenious mode of collection.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The monthly meeting of the members of this Association was held on the 17th inst., Dr. Kenyon in the chair, when it was resolved that Dr. Vacher, Dr. Kenyon, and Dr. Hope be appointed a subcommittee to consider a letter from the President of the Metropolitan Society of Medical Officers of Health inviting medical officers to form themselves into one general society, and to report thereon at a future meeting.